DOCUMENT RESUME

ED 061 772 EM 009 852

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TITLE	A Study of Educational Knowledge Diffusion and Utilization.
INSTITUTION	Massachusetts Univ., Amherst.; Temple Univ., Philadelphia, Pa.
PUB DATE	72
NOTE	125p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Adoption (Ideas); Change Agents; Changing Attitudes; Communication (Thought Transfer); *Diffusion; *Educational Innovation; Information Dissemination; Information Needs; Information Seeking; *Information Sources; *Information Utilization; Innovation

ABSTRACT

Some six hundred educators were studied in depth to determine their experiences with innovation, the influences of recognized diffusion agents upon their adoption of innovations, the characteristics of selected target audiences in relation to the adoption of innovations to personal practice, and relationships between five distinguishable stages of innovation adoption described by rural sociologists and the adoption process described by randomly selected educators. Among the many findings of the study were that: most of the innovative activity was incidental to the operation and financing of the established order; most of the innovations discussed were drawn from outside the environ of the practitioner and used intact or after modifications; personel, direct involvement type diffusion strategies (colleague contact, workshops, institutes, courses) were more popular with innovative subjects. It was also found that innovators have more information sources and more cosmopolite sources of information than do non-innovators. The five-step pattern of innovation diffusion commonly seen in agriculture (awareness/interest/evaluation/trial/adoption) was found to be relatively applicable to the field of education. (JY)

ED 061772

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A STUDY OF EDUCATIONAL KNOWLEDGE DIFFUSION AND UTILIZATION

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CHAPTER ONE: THE PROBLEM

An Orientation

More time, talent and fiscal resources have been directed toward the discipline of education since the termination of World War II than during any comparable period within the recorded history of mankind. This effort has had a profound effect upon all levels and areas of scholarly inquiry. David Clark and Egon Guba capture the flavor of these achievements in the following passage:

> A century ago foreign language instruction emphasized the "dead" classical languages which were taught by rote; now we emphasize modern very-much-alive languages which are taught with electronic equipment. A century ago Spencer and Huxley were pleading for the introduction of a few basic science elements into the curriculum; today the humanists are pleading with educators not to permit science to engulf the rest of the curriculum. A century ago the well-equipped school was a one-room edifice with a pot-bellied stove, a blackboard, and a map-case; nowadays school buildings are designed to conform to carefully prepared "educational specifications" and contain libraries, laboratories, counseling spaces, individual study carrells, and the like. A century ago a high school graduate with a few months of "normal" training could qualify to teach; now we insist on University graduation, carefully supervised practice teaching experience, and a lengthy probationary period before issuing a "permanent" certificate.[1]

Yet, in spite of these attainments, the so-called "average" American school lags considerably behind the so-called "best" schools. This lag has been estimated to be as much as twenty-five to fifty years. While such a lag may be considered to be desirable in some quarters, it is becoming apparent that it is preventing many schools from making suitable adjustments to very rapid social changes.

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[1] David Clark and Egon Guba of Ohio State University, "Effecting Educational Change", an unpublished paper presented to the U.S. Office of Education, March, 1964.

Within the pedagogical community there are established channels of communication to diffuse innovations. These channels tend to be based upon face-to-face contacts and various forms of media. Specific manifestations of this communication network include:

1. Institutes (i.e., NSF , NDEA, or ASCD)
2. Workshops, in-service programs, etc .
3. Designated demonstration centers (i.e., campus demonstration schools)
4. Various forms of media
5. Local, state, and national meetings of education groups
6. Designated job slots (i.e., certain administrative posts or publisher's field personnel)
7. Undergraduate and graduate teacher education programs

Little evidence now exists to assess the degree to which each of these channels actually contributes to and effects educational change.

That is, do educators change their practice as a result of exposure to journals, to short-term meetings, to long-term meetings, to the work of associates, to some other source or to a combination of sources? Will a particular diffusion vehicle work sometimes and not others. If this seems so, can crucial factors be isolated that relate to success and failure? These and other questions motivated the researchers to seek baseline data pertaining to the effectiveness of established communication channels in terms of the diffusion and utilization of knowledge about educational innovations.

The Diffusion and Utilization of an Unusual Dance

Imagine yourself enjoying a summer vacation at an isolated mountain resort in upstate New Hampshire. You and about one hundred guests at the resort have just been introduced to a brand new rock-and-roll style dance by the Social Director. The dance - lets call it the "Burp" - was developed by the Director in association with several friends and resort employees. After the first evening, most guests understood the "Burp"; practically all were "Burp" enthusiasts within three or four days. Two months after the "Burp's" introduction, people throughout the New England and Middle Atlantic states were undulating and contorting in its name. Before the following Winter Season passed, the "Burp" was being enjoyed coast to coast. And by late Spring, the dance was being frequently performed in London, Paris, and Rome bistros.

Now, why did the "Burp" capture the fancy of so many people so quickly? Since this is a hypothetical situation (but not out of line - remember Chubby Checker and the Huckle-buck), we can make appropriate inferences about the phenomenon that transpired. A product, in this case an appealing dance, was introduced to a captive audience by the dance innovator. The product was enjoyable, free, easily learned, and readily transported. Hence, the target audience adopted it, used it at the resort, and presumably used it upon returning home. Three means of diffusion were thus initiated: first, the Social Director and his friends made the dance a regular part of their social repertoire and they performed the dance in the Northern New Hampshire environ; second, guests at the resort diffused the dance to their respective home communities and in effect created a snow-ball situation; and third, in all probability the Social Director was called upon to teach and to display the "Burp" in new settings (i.e., metropolitan night clubs, television shows, etc.). Each means described is informal in the sense that little, if any, effort was made to follow-up progress made by recipients of dance instruction. Yet, the dance profoundly influenced the behavior of people who enjoy performing and watching rock-and-roll dancing.

To recapitulate, a new product was offered to a captive audience by its creator. Since the product was easily utilized and proved to be extremely marketable, the captive audience bought it. Their acceptance was the initial step in an uncharted series of events which served to diffuse the innovation to appropriate, but unspecified, target audiences. And, its international popularity served as a measure of the degree to which knowledge of the dance was utilized. Several roles stand out in this process, namely, an innovator - demonstrator, performers, and interested consumers. Here is an account of knowledge which has been successfully diffused and utilized. A model can be extracted from this account which is not at all complicated, but which might prove to be generalizable to other circumstances. Dance innovators, raconteurs, and innovative physical educators, for example, might profit from a knowledge of this simplistic model.

Unfortunately, most innovations worthy of widespread utilization demand diffusion strategies far more complex than those employed when popularizing the "Burp". Technical knowledge often is essential, and this calls for specialized personnel. Imagine the structure of models that represent the diffusion and utilization of the Salk polio vaccine, of hybrid corn, or of a specialized missile defense system. In each instance, knowledge of the innovation is essential for specialized personnel who intend to deal with it.

Merely building a better mousetrap will not bring the world of pedagogy to one's door. More is at stake than the better mousetrap if an innovator wishes to influence a designated target audience. Two examples are offered to support such a contention.

Two solutions worthy of adoption:

The first example pertains to the experiences and failures of Joseph Mayer Rice. Robert M.W. Travers aptly depicts the plight of Rice in the following manner:

> Rice was a physician by profession, but after a rather brief practice of medicine during the years of 1881-88 became interested in problems of education and left for a two-year visit to Europe where he studied pedagogy and psychology at two great centers of educational thought, namely, Jena and

Leipzig. Rice undoubtedly came under the Herbartian influence as well as that of Wundt and in 1890 returned to America fired with a zeal for educational reform. Like most reformers, his immediate impulse was to tell the public in strong terms that the time for reform had come, and this he did in a forceful article picturesquely entitled "Need School Be A Blight to Child-Life" (1891). In this article he compared some schools he had observed in Germany where "education is regulated more or less mechanically". Perhaps the readers considered the comparison of German Schools with American schools invidious. Public reaction was nil. To bring his case before an even wider public and to expand in detail on the need for educational reform he followed his article with a book entitled: THE PUBLIC SCHOOL SYSTEM OF THE UNITED STATES (1893) in which he summarized the observations he had made on 1200 teachers located in various schools from Boston to Philadelphia in the East to St. Louis and Minneapolis in the Middle West. The book was hardly more successful than the article. Educators paid no attention to the opinions of a layman, who in professional circles rapidly became dubbed as a crackpot. Legend relates that he was met with jeers when he attempted to present his findings to a meeting of the National Education Association.

Like most reformers, Rice was a man dedicated to his cause. If his observations in the classroom were to be brushed aside as the worthless opinions of an amateur, then what he needed was a carefully collected compilation of facts. In terms of the mood of educators in Germany, from which he had so recently returned, this was to be not only the preferred, but also the only sound way of producing educational change. Thus in 1895 he set out to collect information about the skills of school children in arithmetic, spelling, and languages and to relate those skills to the way in which the children had been taught. On the basis of these studies he found that the amount of time devoted to spelling could be at least halved without any reduction in the level of skill which would be acquired. The results of his study of spelling appeared in a new article in the FORUM under the fetching title of "Futility of the Spelling Grind" (1897). Other articles presented data attacking other aspects of current teaching in the schools and finally the entire research enterprise was drawn together in a book entitled SCIENTIFIC MANAGEMENT IN EDUCATION (1913).

Rice's effort to produce educational reform had absolutely no effect on his contemporaries. The outcry of public indignation which he expected would arise as a result of the publication of his research never even reached the level of a murmur. Professional educators could not have shown less response to his findings and recommendations, for little reference is found to him in the educational literature of the period. Yet 50 years later one finds that most of the reforms towards which he had directed his efforts have been incorporated in education. Progressive education of the mid-30's might well have derived

> its charter from the writings of Rice in the mid-90's. One also finds 50 years later that it is still not the research scientist who brings reform to education.[2]

Unfortunately, Rice does not stand alone. Considerable scientific research has been reported in the professional literature since the days of Rice ; yet, the impact of these practices seems to be slight.

The second example was called by Lewis M. Terman "one of the most important contributions thus far made to the problems of higher education in the United States." He compared this study to the Flexner report on medical education and practice. A bulletin describing the study includes this paragraph:

> The study is a landmark in the passing of the system of units and credits, which, useful as it was a third of a century ago, is not good enough for American education today. On a number of pages the Bulletin emphasizes the fact that the package method of academic advancement has served its purpose. American higher education appears to be well on its way to another stage of development in which promotion, at least in college, will be based upon "the attainments of minds thoroughly stored and competent". The authors urge that the student who is ready to go ahead be not hampered by traditional, formalized administrative conventions. Academic progress is to be governed by demonstrative achievements, rather than by the conventional time standards.

Can the reader use these clues to identify the study being discussed, and can he assess the study's impact upon contemporary education?

The study, supported and published by the Carnegie Foundation for the Advancement of Teaching in 1938 under the Title, The Student and Knowledge, focused upon the relations of secondary and higher education in Pennsylvania. William S. Learned and Ben D. Wood proposed (1) to fix attention primarily on the nature, the apparent needs, and the actual achievements of the individual student in his successful contacts with existing institutional forms; and

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[2] Robert M.W. Travers, "A Study of the Relationship of Psychological Research to Educational Practice", Training Research and Education, New York: John Wiley and Sons, Inc., 1962, pp. 525-527.

(2) to consider the educational performance of school and college as a single cumulative process of which, for any given student, should be complementary.[3] Their investigation consisted of two parts: first, a comprehenvise examination administered to 4,580 graduating seniors in 49 Pennsylvania colleges, presumably to depict the accumulated intellectual funds of the class of 1928; and second, a comprehensive examination administered to the graduating seniors of 1928 of the public and private secondary schools of Pennsylvania and to the 27,000 seniors who enrolled in institutions of higher learning within the state again in 1930 and in 1932 presumably to derive a measure of academic growth.

Their study, referred to as the Pennsylvania Study, was a valuable undertaking. It revealed the enormous differences among colleges and among students enrolled in specific colleges; it convincingly exposed the weakness of the course-credit system as a measure of educational achievement; it focused upon the inadequacies of teacher trainees in Pennsylvania colleges; and as the first state-wide evaluative testing survey, it set a new standard for systematic research inquiry.

Now, what impact did the Learned/Wood effort have upon involved educational institutions in Pennsylvania in particular and upon educational institutions in general that might be influenced by the evidence? Wood wrote in 1964 that the situation which was so dramatically exposed is still largely with us. "We still have colleges," he noted, "that regularly graduate classes that, in ordinary high school English reading and vocabulary tests, average at the senior high level, although there are many colleges whose freshmen stand entirely above the whole population of some of these low colleges."[4]

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[3] William S. Learned and Ben D. Wood, The Student and His Knowledge, New York: The Carnegie Foundation for the Advancement of Teaching, p.x.

[4] Matthew T. Downey, Ben D. Wood: Educational Reformer, Princeton: Educational Testing Service, 1965. pp. 21-22.

Perhaps Wood criticized the impact of his study effort too severely.

Granted significant variability among given college populations continues, the course-credit system still rules the land, and institutional teacher training programs leave much to be desired. However, the research approach employed by Learned and Wood may yield serendipitous dividends in the hands of contemporary psychometrists. Society is placing more and more emphasis upon standardized, independently derived measures to determine a person's capabilities and performance level. As this approach evolves and matures, the calibre of college graduates, the course-credit system, and the training of teachers may be effected accordingly.

Here is an example of a study which was carefully planned and executed, which yielded significant information, yet which failed to alter the behavior of very many pedagogical practitioners. The account is used to focus upon the process of influencing or changing the practice of individuals within institutional settings.

Diffusion and utilization factors of importance:

These two examples of jobs well done illustrate the point that better mouse traps actually exerted little influence upon potential target audiences. Undoubtedly, many other similar experiences could have been selected to illustrate the point intended. Now, what must be done above and beyond the efforts of Rice, Learned and Wood, to modify the behavior of pedagogical practitioners? Analyses of fields that are routinely influenced and modified by scientifically derived information provide clues to the essence of their success. These fields try to incorporate all or part of the following practices:

1. A network of respected, believable knowledge producers;
2. A source of venturesome technicians and interpreters;
3. Facilities for field testing knowledge offered;

4. Well-defined and respected communication channels through which information is effectively offered to designated audiences;
5. An information storage and retrieval service;
6. A cadre of diffusion agents functioning at a grass roots level to insure that worthy knowledge is adopted;
7. Economic incentives for the adaptation of innovations offered.

Perhaps the fields of agriculture, medicine, and certain governmental agencies best reflect these characteristics.

When these seven practices are applied to professional education, one can readily perceive why innovations offered in that field are received in a haphazard manner. The field lacks reliable knowledge producers, interpreters usually prove to be graduate students who have other competing concerns, marketing strategies seldom are seriously cogitated, and information storage and retrieval is in a primitive state. No well-defined and respected communication channel exists to effectively diffuse innovations to appropriate target audiences. A cadre of diffusion agents functioning at the grass roots level is absent. And, practitioners are accustomed to adopting innovations offered without benefit of evidence of their effectiveness and without clear-cut comprehension of their implementation. These statements, taken together, account for the chaotic state of innovation diffusion and utilization in the field.

Change Components To Be Considered

When components associated with specific illustrations of change are studied for the purpose of extracting a set which may be generalized to many diverse situations, problems arise. For example, either social disorganization or clever marketing may account for the success of a given innovation.

As diverse as these factors may appear, both deserve a place in the generalizable set under the category conditions for change. If an innovator effervesces a fair amount of charisma and if he is willing to delve into the applied realities of innovation diffusion and utilization, he will probably be more successful than innovators who lack charisma and a flair for application. Characteristics of the innovator are certainly important; yet, they are most difficult to delimit for study purposes. The complexity of an innovation dictates a number of subsequent requirements such as specialized personnel, training, resources, or facilities; the level of change called for; the formality of communication channels needed; and the investment of time and effort necessary to enable prospective clients to adopt the innovation. Fortunately, this component can be treated more easily than the previously mentioned components. Finally, characteristics of the target audience need to be taken into account prior to the diffusion effort. In fact, detailed knowledge of the recipients ought to contribute vitally to diffusion strategies employed by innovators. Since little is known about educational consumer behavior at present, much baseline descriptive work is needed.

To summarize, conditions for change, characteristics of the innovator, the complexity of the innovation, and characteristics of the target audience seem to be overarching factors of importance to the adoption process. Within the context of each factor there exists an indeterminate constellation of sub-factors. These sub-factors are influenced by the complexity of an innovation offered, and can be delineated for study without too much difficulty. Further study may ultimately reveal universal sub-factors within each of the four overarching categories; however, the amorphous and speculative state of information about educational knowledge diffusion and utilization calls for more clarity before systematic efforts to uncover such sub-factors can be initiated.

Three recent educational innovations commanding much professional attention are viewed in the context of the change components mentioned. They are PSSC, SRA reading laboratories, and ERIC. PSSC called for complex restructuring of practice, the reading laboratories amounted to either a simple alteration or fairly complex restructuring of practice (most adopters fall into the former category), and ERIC offered an extension of practice. Each is detailed in the following paragraphs.

The Physical Science Study Committee

World War II established science as an important bulwark of a free and open society. Hence, the increasing concern of scholars through the early fifties with the nature of secondary school physics instruction, a declining enrollment in college-level physics courses, and a shortage of scientific manpower, prompted Jerold Zacharias of M.I.T. to propose an alternative to conventional physics instruction. His proposal captured the imagination of the scientific community and generated millions of dollars of support from the National Science Foundation.

The development of Zacharias' physics curriculum for secondary schools can be divided into four stages:

1. Drawing the outline and developing the curriculum structure. This was accomplished at a meeting of some fifty scientists in 1956.
2. Establishing a steering committee. University professors, industrial physicists, high school physics teachers, editors, and other individuals were assembled, then subdivided into five groups. Each group charted a particular developmental task for the project. One devised apparatus and experiments, while the other four drafted textual material. A package was completed by 1958.
3. Pilot testing the completed package. Pilot high schools were selected to try out the new physics materials. Committee members served as teachers in each experimental setting. These teachers and classroom visitors on the

committees generated written reactions which served as a basis for program revisions. After two years of such feedback, the final version began to take shape. Descriptive rather than empirical information (most empirical studies initiated lacked rigor) was a prime product of the pilot tests.

4. Diffusing the new curriculum. No clear diffusion strategy seemed to emerge from the committee efforts. By and large they relied upon the scientific press and in-service institutes to diffuse PSSC to practitioners. Since the PSSC people were unable to control the training activities of the institutes, much variability transpired. And the institutes seemed less effective as a diffusion vehicle than former PSSC committee members.

Dr. Zacharias certainly possessed the charisma needed to effectively capitalize upon the social disorganization of science instruction in the early fifties. The innovation generated, a packaged high school physics curriculum, called for specialized training and purchase by potential users. The extent of PSSC adoption suggests the working committees were able to cope with the innovation's complexities. High school teachers of physics were prime targets for the package.

The SRA Reading Laboratories

The Science Research Associates reading kits were born out of economic necessity. In the early 1950's an imaginative teacher was faced with more pupils than instructional materials. He solved his dilemma by cutting up some available tests in the room and putting the pieces in the hands of many students.

The plan worked so well, the teacher modified the strategy and then offered it to a publisher, SRA, for marketing. The package developed at SRA was simple enough to be used by most teachers without formal training. Once ready for market, the reading kit was quite attractive, quite logical, and quite economical.

Marketing strategies included college class demonstrations, mailing announcements to prospective users, and personal contact by field representatives. These efforts were hampered by a lack of pilot test data, by a lack of understanding of the pluses and minuses of the kit, and by an uncertain awareness of the potential target audience.

The reading kits seemed to meet a teacher's instructional needs, so it was adopted. In this instance, the actual innovator wasn't as important as the marketing potential of SRA. The innovation wasn't very complicated and it could easily be incorporated within a classroom operation. Elementary school reading teachers were the focal point of SRA marketing operations.

ERIC

The Educational Research Information Center (ERIC) was created in early 1964 by the U.S. Office of Education to "facilitate and coordinate information storage and retrieval efforts in all areas of educational research". It reflected a need for a centralized information center in the area of education. Three USOE officials were instrumental in getting the system off the ground and operational. They were assisted by college and university officials who were awarded contracts to develop specific aspects of the network.

By 1967, ERIC consisted of a central management unit within the USOE, eighteen clearinghouses located on campuses across the nation, a computer contractor, an educational document reproduction service, and the use of the Government Printing Office. The ERIC system collects, screens, indexes, abstracts, and reproduces educational research reports. Two products result: "Research in Education", a monthly publication of research abstracts and an index of new reports; and, microfiche and printed copy of the complete reports.

Eric is aimed at two audiences: the university research community; and, the nation's public school systems. "Research in Education" is now sold to about 3,700 users per month. An additional 1000 copies are distributed by the USOE. Sales of microfiche totalled one million plus bits in 1967; a four or five fold increase was anticipated for 1968. Standing orders for the entire ERIC microfiche collection, as of July, 1968, amounted to 115 (with an additional 60 within the USOE). About two-thirds of the standing orders were from colleges and universities.

No clear-cut strategies seem apparent inso far as USOE efforts to market ERIC are concerned. USOE officials speak extensively before education groups about the Center, and they have discussed it at length in the professional literature. And each ERIC clearinghouse distributes publicity, calls for papers, and in some instances regular newsletters to the public.

The conditions were ripe for the introduction of ERIC. Medicine had its "Medlar", the Department of Defense enjoyed DDC, and scientists could contact the FCSTI. Education followed in the footsteps of these existing information storage and retrieval systems. No particularly strong innovator emerged to guide the development of ERIC; rather, a number of people participated in its development. ERIC is a complex system, financed in a particularly complex manner; hence, the developmental period has stretched over three or four years. Even though two publics were identified as target audiences, these practitioners have hardly scratched the system's surface. If ERIC were a private rather than a public enterprise, bankruptcy would be staring it in the face today. ERIC has not yet been adopted by most potential users, but it is still an infant.

In retrospect, conditions were appropriate for the introduction of all three innovations. Only one the three, PSSC, was dependent upon the charisma and contacts of a strong innovator. Two of the three, PSSC and ERIC, were complex enterprises involving many people and agencies. And two of the three (PSSC and the reading laboratories) have had a noteworthy impact upon intended target audiences. It is too soon to judge the impact of ERIC.

Intensive study of each innovation revealed the above successes were not dependent upon empirically derived supportive information, they did not use systems approaches for their development, and with the possible exception of SRA's marketing plans for the laboratories, they were not systematically diffused. Who knows what impact might have been made were these innovations put in the hands of rural sociologists or pharmaceutical houses.

A Point of Departure

There exists a need for baseline data pertaining to the educational knowledge diffusion and utilization process. Understanding things as they are seems called for before systematic efforts can be undertaken to improve the process. This study has been designed to establish both a foundation and an inquiry thrust for probing into the problem. It is viewed as a point of departure for many similar studies.

CHAPTER TWO: THE STUDY

Specific Intentions

As the experiment was initially conceived, two specific objectives were to be pursued, namely:

1. To study the relationship between stated intentions and the field impact of selected educational diffusion agents.
2. To systematically gather, organize, and report relevant data pertaining to the selected agents so that the effectiveness of each can be assessed.

"Diffusion agent" referred to a specific journal, meeting, institute, etc. The phrase "diffusion strategies" is also used as if it were a synonym of diffusion agent.

Before the study procedures became solidified, the researchers recognized a significant flaw in the objectives conceptualized. Emphasis had been placed upon the output of selected diffusion agents rather than upon the practice of educators. Consequently, the researchers placed themselves in the difficult position of uncovering cause-effect chains between the output of specific diffusion agents and specific changes in school practice. Several pilot probes, designed to test prepared survey instruments, revealed particularly thorny problems in treating data gathered. Changes were called for in the study plan, so changes were made.

The reconceptualized study focused upon the practice of the educator. Even though he was randomly selected as part of the study sample because of his exposure to a diffusion agent of interest to the researchers, this selection didn't prevent a much more extensive analysis of information gleaned during a 30 to 60 minute face-to-face interview with him. Hence, the reconceptualized study probed into the following:

1. The extent to which teachers, supervisors and administrators, and teacher educators (a) have adopted innovations within the past year or so, (b) plan to adopt innovations within the next year or so, or (c) tried but failed to adopt innovations within the past year or so, in their personal practice.
2. Influences of recognized diffusion agents upon the adoption of innovations (i.e., practices, products, and ideas that are new to the practitioner) to the personal practice of teachers, supervisors and administrators, and teacher educators.
3. Characteristics of selected target audiences (level of experience, years of professional experience, and earned academic credits) in relation to the adoption of innovations to personal practice.
4. Characteristics of selected diffusion strategies (style, duration, and audience size) in relation to the adoption of innovations to personal practice.
5. Relationships between five distinguishable stages of innovation adoption reported by Rogers, Lionberger, and others, and the adoption process described by randomly selected educators.

Several additional analyses of data obtained are under way as an extension of this study.

Diffusion Agents Considered

Diffusion agents which seemed representative of those currently employed in the field of education were selected for study. No formal criterion was structured as the basis for selection; rather, factors such as extent of impact, data accessibility, and level of education treated, served as operating criteria.

Selected diffusion agents included publications, brief assemblages, and extended assemblages. Elementary English, The National Elementary Principal, School Science and Mathematics, The Instructor, and The Saturday Review, represented publications selected. Annual professional meetings of the Association for Supervision & Curriculum Development (ASCD), the National Association of Elementary School

Principals (NAESP), the Association for Childhood Education International (ACEI), and the International Reading Association (IRA), plus ASCD sponsored regional institutes held at Denver, Detroit, Minneapolis, and Washington, D.C., constituted the sample of brief assemblages. The extended assemblages included National Defense Education Act summer institutes at the University of Virginia (English), Middlebury College (English), Howard University (Reading), and Albright College (German), and NDEA academic year institutes at the University of Georgia (Guidance and Counseling), the University of Buffalo (Guidance and Counseling), Bank Street College (Cultural Deprivation) and New York University (Cultural Deprivation). Figure One portrays the sample described above.

Subjects to be interviewed were selected because of their exposure to these particular diffusion agents. After selecting the subjects and after evolving the survey instrument for use during the face to face interviews, the researchers realized their previously-mentioned conceptual mistake. Fortunately, the instrument used was sufficiently open-ended to permit the change in study focus without serious disruption of the enterprise. Information offered by the subjects applied to the specific diffusion agents mentioned, but -- more important -- it also yielded all conceivable alternatives the subject might have considered at the time of innovation.

Given the nature of sample selection and the shift in study focus, this population is probably (but not necessarily) biased in the direction of innovative activity. Many members of the educational community are not exposed to the diffusion agents cited. They did not have an opportunity to be selected. So study generalizations must be considered in terms of educators who are exposed to the diffusion agents mentioned.

Figure One: Diffusion Agents Selected for Study

PUBLICATIONS	BRIEF ASSEMBLAGES	EXTENDED ASSEMBLAGES
Elementary English	ASCD Annual Meeting	NDEA Summer Institute (University of Virginia)
The National Elementary Principal	NAESP Annual Meeting	NDEA Summer Institute (Middlebury College)
School Science and Mathematics	ACEI Annual Meeting	NDEA Summer Institute (Howard University)
The Instructor	IRA Annual Meeting	NDEA Summer Institute (Albright College)
The Saturday Review	ASCD Regional Institute (Denver)	NDEA Academic Year Institute (University of Georgia)
	ASCD Regional Institute (Detroit)	NDEA Academic Year Institute (University of Buffalo)
	ASCD Regional Institute (Minneapolis)	NDEA Academic Year Institute (Bank Street College)
	ASCD Regional Institute (Washington, D.C.)	NDEA Academic Year Institute (New York University)

Sample Selection

While the co-directors hoped to obtain a study sample that met the usual specifications of "randomness", several factors prevented such an outcome. First, the staff was not given access to the desired lists of names by all contacted agencies, but received several lists prepared by the agencies themselves. And second, the reality of the project travel budget demanded that subjects residing in isolated geographic locations be excluded in several instances. The first limitation boils down to the fact that the researchers really don't know how the subjects were selected by several contacted agencies. They can only infer that the agencies honored their request to select "X" number of names at random from a given population. While many geographically isolated subjects are included in the sample, it is not unreasonable to believe that some will be deleted because of their isolation; hence, a second limitation -- namely that the researchers are apt to bias the population slightly in favor of subjects residing in or close to urban centers -- must be recognized.

Subjects were selected as follows:

1. ASCD Regional Research Institutes (N = 60)

   Complete lists of participants who attended four recent ASCD Regional Research Institutes located in cities east of the Mississippi River were obtained. From these lists 30 names and then 15 names from the 30 were randomly selected for each institute, after deleting participants residing west of the Mississippi River. (One exception was the Denver meeting. This institute was selected for recency; hence, participants west of the Mississippi were selected. This modification was made after the original four were considered.)

2. NDEA Summer and Academic Year Institutes (N = 120)

   Complete lists of participants who attended 6 recent summer and 6 recent academic year institutes were obtained. The former were selected randomly from a list of completed institutes, whereas the latter constituted the complete range of choice offered by representatives of the Research Training and Dissemination Division of the U.S.O.E. From these selections the researchers arbitrarily selected four summer and four academic year institutes. Then, they randomly selected 30 names and then 15 names from the 30 per institute after deleting participants residing west of the Mississippi River.

3. Professional Publications (N = 250)

   Complete lists of subscribers for Elementary English and The Instructor were obtained. From these lists 100 names and then 50 names from the original 100 were randomly selected.

   The Editors of the Saturday Review, School Science and Mathematics, and the National Elementary Principal at our direction, offered a randomly selected list of subscribers. From these lists 100 and then 50 names from the original 100 were randomly selected.

4. Annual Professional Meetings (N = 200)

   Administrative officers of ASCD, NAESP, and ACEI made available complete lists of registered participants attending the organization's last professional meeting. From these lists 100 names and then 50 names from the original 100 were randomly selected.

   The Executive Secretary of IRA, at the researchers' direction, mailed a randomly selected list of conference participants. From this list 100 names and then 50 names from the original 100 were randomly selected.

A sample 100% larger than deemed necessary for the study was obtained initially. From this number, the desired subjects were randomly selected. The researchers anticipated subject apathy, negative reaction to an interview, change of address, death, and so forth; hence, the additional set of prospective subjects. As anticipated, many additional contacts were called for. The source of these additional contacts was the reserve set of study subjects.

There were 630 interviews possible, given a 100% positive reaction to the researchers' initial request for help. In fact, 875 contacts were made in all. These contacts yielded 631 completed interviews, or a 72% return for the energy expended. The quota set for five of the sub samples was not met, whereas in thirteen instances an excess of interviews was completed. These variances were not considered to be deleterious to the study intentions. Figure Two portrays the study population by sub sample.

Figure Two: Subjects Contacted and Interviewed by Sub Sample

	NAME OF SUB SAMPLE	TOTAL N CONTACTED*	COMPLETED INTERVIEWS
1.	ASCD Institute (Detroit)	19	15
2.	ASCD Institute (Denver)	16	13
3.	ASCD Institute (Washington, D.C.)	21	18
4.	ASCD Institute (Minneapolis, Minn.)	20	18
5.	NDEA Summer Institute (Virginia)	23	15
6.	NDEA Summer Institute (Middlebury)	35	19
7.	NDEA Summer Institute (Howard)	27	19
8.	NDEA Summer Institute (Albright)	22	16
9.	NDEA Academic Year Institute (Georgia)	28	19
10.	NDEA Academic Year Institute (Buffalo)	27	22
11.	NDEA Academic Year Institute (Bank Street)	22	18
12.	NDEA Academic Year Institute (N.Y.U.)	19	16
13.	School Science and Mathematics	67	52
14.	Instructor	72	37
15.	Elementary English	72	55
16.	National Elementary Principal	56	40
17.	Saturday Review	56	30
18.	Annual Meeting (ASCD)	65	55
19.	Annual Meeting (ACEI)	67	50
20.	Annual Meeting (IRA)	61	42
21.	Annual Meeting (DESP)	80	62
	TOTALS	875	631

* Negative or no response realities caused us to select additional names from a pool of random choice for each sub sample.

The Data Acquisition Process

The data acquisition process involved recruiting a project staff, evolving a survey inventory, validating the survey instrument, training selected interviewers for the task delimited, contacting the sampled individuals plus arranging details for face-to-face interviews with them, and compiling data obtained from the interviews for analytical purposes. Each of these components of the process is amplified in the following paragraphs.

Project Staff. The original project staff -- consisting of the co-directors, two full-time interviewers, one combination secretary/interviewer, an interview trainer, and a project advisory council -- was assembled during the summer of 1966. During February, 1967, another full-time interviewer was employed. At the end of the summer of 1967, all four interviewers completed their appointments. They were replaced by two full-time interviewers and a part-time office manager at that time. The interviewers, with one exception, were experienced educators pursuing advanced degrees in school administration or guidance and counseling at the University of Massachusetts.

The interviewer trainer is a professor of guidance and counseling at the University of Massachusetts. He assumed prime responsibility for the interviewer training. The first group of interviewers spent six to eight weeks learning, practicing, studying video-tape recordings of their performance, and discussing problems to be encountered. At the point when they performed in a compatible manner in the opinion of the trainer, they initiated the required field work. Subsequent interviewers were able to benefit from the accumulated wisdom of the original group and also accompany the original interviewers during data gathering trips. As a result, much time was conserved in raising their performance to a desirable level. Careful attention was placed upon interviewer compatibility in obtaining desired data.

The project advisory council consisted of the following individuals :

Matthew Miles
Columbia University

Herbert Lionberger
University of Missouri

David Clark
Indiana University

Henry Brickell
Indiana University

Robert M. W. Travers
Western Michigan University

In addition, Egon Guba of Indiana University and William Gephart of Phi Delta Kappa, served as interim members of the council.

Survey Instrument. A problem which the researchers faced pertained to the nature of the survey tool. Two alternatives seemed apparent: first, design a series of instruments, each geared to a particular diffusion agent; or second, design a single instrument applicable to all diffusion agents. The former would yield intimate data, but only as a result of considerable preliminary work into the character of each selected diffusion agent. The latter would have to be regarded as quite open-ended; hence, data analysis would be difficult. After a series of trial and error experiences, the researchers evolved an inventory which was based upon the second alternative.

The first draft of a survey instrument was prepared by the end of the summer of 1966. It provided a point of departure for training the project interviewers. A pilot trial with the instrument revealed serious flaws. Two major revisions and two subsequent pilot trials resulted in an instrument which seemed appropriate.

The instrument that emerged focused upon ideas and practices which are new to the interviewee and which have been, are about to be, or were unable to be adopted in his work. The instrument is designed to delve into antecedent and causal events that are germane in the mind of the interviewee. It also is designed to obtain descriptive data about influential diffusion agents and earmarked target audiences. The instrument ultimately used is included as Figure Three.

Figure Three: The Interview Inventory

1. Name________________________________

2. Title of Position____________________

3. Employer____________________________

4. Years of Professional Education Experience Primarily as:

    a. An elementary or secondary Teacher ________
    b. A supervisor of administrator ________
    c. A teacher educator ________
    d. Other ________

    TOTAL ________

5. Academic Experience:

    a. Do you have a degree? If so, what is the highest? ________
    b. Do you have any graduate credit beyond this degree?
        (a) Less than 4 years of college ________
        (b) Bachelors degree ________
        (c) Less than 30 hours of graduate study ________
        (d) Masters degree ________
        (e) Less than 90 hours of graduate study ________
        (f) Doctoral degree ________

6. My purpose in visiting you is to inquire about your experiences with innovative or new educational practices, products, and ideas. When I refer to "new educational practices", I am referring to those that are new to you. I am going to ask you a series of questions in four categories relative to your experiences with new educational practices, products, or ideas.

First, those that you are aware of and in which you are interested.

Second, those that you initiated and have adopted in your work.

Third, those that you initiated and definitely plan to adopt.

Fourth, those that you would like to adopt.

Do you have any questions?

Before we begin, I would like to make two suggestions concerning the interview. First, don't make the tape recorder rush you in thinking about your answers, take time to think, I have planty of tape. Second, we know that not everyone will have innovations to discuss in each of the four categories. If after some thought and perhaps some help from me, you can't think of anything we will go on to the next series of questions. Shall we begin?

7. Please identify those new practices, products, or ideas that you are aware of and have attempted to obtain information about? (Mention each by name briefly.)

   (Interviewer: Make a written note of each mentioned and then ask the following questions about each. If none mentioned go on to the next page.)

   a. How did you first become aware of ____________________________________?

   b. What other sources have you used in gaining information about__________ ____?

ADOPTED INNOVATION

8. Please identify any new practices, products, and ideas that YOU initiated, introduced and have adopted in your work during the past year. By adopted I mean that it is now an accepted part of your work.

   (Interviewer: Make a written note of each mentioned, and then subject each to the following series of questions. If no adoptions of innovations are offered, go on to next page.)

   a. Briefly describe ______(each, one at a time)______

   b. Describe the procedures you used to incorporate ______ ______ in your work.

   (Interviewer: If trial or pilot study not mentioned, ask the following:)

   1. Did you use ______ on a trial basis before you adopted it?

   (Interviewer: If yes, go to 1.1 -- If no, go to 2)

   1.1. Explain your methods of assessing the results of the trial phase.

   2. Explain your methods of assessing the worth of ______.

   c. When did you first become aware of ______?

   d. How did you become aware of ______?

   (Interviewer: Wait for response. If none forthcoming, suggest readings, people, meetings, conferences, etc.. Get specific responses.)

   e. What other sources did you use to gain the information necessary to determine the possible usefulness and application of ______ ______ in your work?

   f. What influenced your decision to adopt ______ in your work?

   (Interviewer: Follow same directions as in d.)

   g. What are your future plans concerning the use of ______ ______ in your work?

INNOVATIONS EARMARKED FOR ADOPTION

9. Please identify any new practices, products and ideas that you initiated and definitely plan to adopt in your work within the next year.

   (Interviewer: Make a written note of each mentioned, and then subject each to the following series of questions. If no innovations are earmarked for adoption, go on to the next page.)

   a. Briefly describe ______(each, one at a time)______________________.

   b. What sources did you use to gain the information necessary to determine the possible usefulness and applicability of ________________ in your work?

   c. When did you first become aware of ______________________________?

   d. What influenced your decision to adopt __________________ in your work?

      (Interviewer: Follow same directions as in b.)

   e. Describe the procedures you expect to use to incorporate __________ ______________ ______ in your work.

      (Interviewer: If trial or pilot study not mentioned, ask the following:)

      1. Do you plan to try _______________________ on a trial basis before you adopt it?

      (Interviewer: If yes, go to 1.1 -- if no, go to 2)

      1.1. Explain the methods you plan on using to assess the results of the trial phase.

      2. Explain the methods you plan on using to assess the worth of _____ __________ ____________________ ______________.

   f. How did you become aware of ____?

      (Interviewer: Wait for a response. If none is forthcoming suggest readings, people, meetings, conferences, etc. Get specific responses.)

INNOVATIONS OF INTEREST BUT NOT ADOPTED

10. Please identify any new practices, products and ideas that you would like to adopt in your work, but for some reason you are prevented from doing so.

(Interviewer: Make a written note of each mentioned, and then subject each to the following series of questions. If no innovations are mentioned, go on to the next page.)

a. Briefly describe____.

b. Describe the procedures you used in attempting to incorporate________ ______________________________ in your work.

c. When did you first become aware of______________________________?

d. How did you become aware of ______________________________?

(Interviewer: Wait for a response. If none is forthcoming suggest reading, people, meetings, conferences, etc. Get specific responses.)

e. What other sources did you use to gain the information necessary to determine the possible usefulness and applicability of______________ ______________________________ in your work?

(Interviewer: Follow same directions as in d.)

f. What influenced your desire to adopt______________________________ ____________________in your work someday?

(Interviewer: Follow same directions as in d.)

g. Explain why you haven't been able to adopt__________________________ ____________________ in your work.

(Interviewer: Attempt to obtain specific reasons.)

SOURCES OF INFORMATION

11. Briefly note the influence of the following information sources upon your knowledge of educational innovations such as those previously discussed:

    a. Education Associates: 1. Which colleagues (that is, teachers, principals, supervisors, etc.) prove to be most influential?
    2. In what ways are these individuals an important resource?

    b. Non-Education Associates and Friends. 1. Which individuals (that is, neighbors, club contacts, etc.) prove to be most influential?
    2. In what ways are these individuals an important resource?

    c. Publications (i.e., journals, newspapers, books, etc.): 1. Which particular publications or sections of publications do you rely upon for information?
    2. In what ways are publications an important resource?
    3. What part do you pay for each of these?

    d. Brief Assemblages (1 day to a week -- i.e., professional organization meetings, annual conferences, institutes, etc.): 1. Which particular assemblages do you regularly attend for information?
    2. In what ways are these assemblages an important resource?
    3. What part do you pay for each of these?

    e. Extended Assemblages (Several weeks to a year -- i.e., college-level courses, summer and academic year institutes, seminars, etc.): 1. Which particular assemblages do you select for information?
    2. In what ways are these assemblages an important resource?
    3. What part do you pay for each of these?

MISCELLANEOUS

12. Do you subscribe to Saturday Review?

    a. Yes

    b. No

Conducting the Interviews. Each subject was initially contacted by mail. He received a letter (a) indicating the importance of his participation in the project, (b) describing the project itself, and (c) suggesting possible dates for a face-to-face interview. A self-addressed, stamped post card for his response accompanied each letter. Follow-up to this communique included two additional notes plus a phone call if necessary.

The interviewers arranged field trips based upon responses received from the subjects. Trips were usually arranged for five or more days, with at least three interviews scheduled each day. Often, the interviewers called prospective subjects in an area visited who hadn't responded to prior written communiques or who responded negatively. These telephone contacts resulted in a substantial number of face-to-face interviews.

Interviews consisted of a brief warm-up period to establish rapport (during which the interviewer obtained permission to tape record the session), the interview itself (which required 15 to 80 or 90 minutes to complete), and follow-up conversation about the project. The subject was not alerted to the fact that his selection was based upon exposure to a given diffusion agent. Following the interview, information included on a tape was transferred to the survey instrument and then later to a standard codification sheet which was stored for later analysis.

Interviewing began during the late Fall of 1966 and it was completed during the summer of 1968.

Codifying the Data. The codification scheme ultimately employed was built upon insight gained from four prior attempts to handle the data meaningfully. It met the criterion of openness, clarity, internal consistency, and external validity set forth by the researchers. And it lent itself to key punch card storage and computer data processing.

Elements of the scheme included the following:

1. A demographic data section treating subject data (level of experience, years of experience, and earned academic credits), sources of data, and an index of innovativeness.
2. A series of items treating the classification of identified innovations in terms of effects upon practice (the seven series).
3. A series of items with three prime themes (the eight, nine, and ten series):
    a. Characteristics of educational change in relation to innovations discussed (nature of innovation, time of initial awareness, source of information, nature of intervention in target setting, reason for changing practice, probable use within target setting, and the status of innovation).
    b. Functional stages in the process of educational change in the context of a model offered by rural sociologists (awareness, interest, evaluation, trial, and adoption).
    c. Characteristics of diffusion strategies in relation to innovations discussed (nature of diffusion strategy, style, duration, and audience participation).
4. A series of items focusing upon value ascribed by subjects to diffusion strategies (the eleven series).
5. A miscellaneous series which probably will not be reported (the twelve series).

The complete codification scheme is included in Appendix A.

All the data was codified and transferred to key punch cards by the winter of 1969.

Processing the Data. A program was prepared by the University of Massachusetts computer center to process information stored on key punch cards. The program was designed to accomplish the following:

1. Summarize information pertaining to each of the survey inventory items;
2. Relate these summaries to characteristics of the study sample and of the diffusion agents;

3. Obtain and then rank the index of innovativeness for each subject, draw out the 50 highest and 50 lowest scores, then summarize in terms of five considerations;

4. Obtain and then rank the composite indices of innovativeness for each source of data (all subjects within each source of data), draw out the five highest and five lowest composite scores, then summarize in terms of three considerations.

All data printouts were available for analysis by September, 1969

Additional Analyses. Two specific analyses of the data obtained are included in this report. The first study contrasted the behavioral patterns which emerged for the fifty most and fifty least innovative subjects interviewed. The second study compared five of the twenty-one sources that accounted for the most innovative subjects in the sample with five of the twenty-one sources that accounted for the least innovative subjects in the sample.

Both sub-samples were selected by the computer on the basis of an arithmetic score that was derived for each subject. A subject "earned" nine points for each innovation adopted, four points for each innovation about to be adopted, and one point for each innovation attempted but not adopted. The values 9,4 and 1 were arbitrarily determined by the researchers.

CHAPTER THREE: THE DATA

An incredible amount of data were generated from this study, which permitted a thorough analysis of knowledge diffusion and utilization practices within the parameters set forth. These data are reported in the following manner:

1. Prevalent practices of subjects as suggested by frequency counts of their responses to each of the inventory items;
2. Prevalent practices of subjects considered in terms of level of experience, years of experience, and earned academic credit;
3. Prevalent practices of subjects considered in terms of sources of data;
4. Characteristics of the most and least innovative subjects as suggested by frequency counts of their responses to each of the inventory items;
5. Characteristics of sources of data which contribute to the level of innovativeness studied;

The computer program employed yielded the frequency counts desired, and in addition offered chi-square and correlation coefficient information. The latter information is reported as it is pertinent to an understanding of the data described.

Some technical problems occurred in the process of transferring information from audio tape cartridges to master audio tape cylinders. Consequently, information is offered for up to 595 rather than 631 subjects in this chapter. Six taped interviews were permanently lost as a result of faulty taping equipment. Thirty interviews of Saturday Review subscribers were deleted because of a random selection question. Since the six lost tapes were randomly scattered across the entire sample, the loss was viewed as most unfortunate but not particularly serious.

Role, Experience and Training Characteristics of the Sample

The level of experience of the 595 subjects includes 164 teachers, 240 supervisors and administrators, 60 teacher educators, and 131 individuals representing a variety of roles, retirement status, and student status. Insofar as their years of educational experience is concerned, 4 served for less than a year, 173 served from one to ten years, 414 served more than ten years, and 4 could not be categorized. Seven subjects spent less than four years in college, 120 earned a bachelors degree but less than 30 hours of graduate credit, 466 possessed a masters degree or more, whereas 2 could not be categorized. Figures Ones, Two and Three portray relationships among level of experience, years of experience, and earned academic credit.

Figure One: Level of Experience by Years of Experience *

Years of Experience	Level of Experience: Teacher	Supervisor and Administrator	Teacher Educator	Other	Total
Less than one year	1 (0.17)	--- ---	--- ---	3 (0.51)	4 (0.67)
One to ten years	86 (14.48)	25 (4.21)	8 (1.35)	53 (8.92)	172 (28.96)
More than ten years	75 (12.63)	215 (36.20)	52 (8.75)	72 (12.12)	414 (69.70)
Other	1 (0.17)	--- ---	--- ---	3 (0.51)	4 (0.67)
Total	163 (27.45)	240 (40.40)	60 (10.10)	131 (22.05)	594 (100.00)

---

* One subject was not included in this chart by the computer.

Figure Two: Level of Experience by Earned Academic Credits *

Earned Academic Credit	Level of Experience				
	Teacher	Supervisor and Administrator	Teacher Educator	Other	Total
Less than four years	2 (0.34)	2 (0.34)	--- ---	3 (0.51)	7 (1.18)
Bachelors but less than 30 hrs. of graduate credit	89 (14.98)	10 (1.68)	--- ---	20 (3.37)	119 (20.03)
Masters degree or more	79 (12.12)	228 (38.38)	59 (9.93)	107 (18.01)	466 (78.45)
Total	163 (27.44)	240 (40.40)	1 blank 60 (10.10)	1 blank 131 (22.05)	2 (0.34) 594 (100.00)

* One subject was not included in this chart by the computer.

Figure Three: Years of Experience by Earned Academic Credits *

Earned Academic Credit	Years of Experience: Less than one year	One to ten years	More than ten years	Other	Total
Less than four years	2 (0.34)	2 (0.34)	2 (0.34)	1 (0.17)	7 (1.18)
Bachelors but less than 30 hours of graduate credit	2 (0.34)	66 (11.13)	50 (8.43)	1 (0.17)	119 (20.07)
Masters degree or more	--- ---	104 (17.54)	360 (60.71)	1 (0.17)	465 (78.41)
Total	4 (0.67)	172 (29.01)	1 blank (0.17) 413 (69.65)	1 blank (0.17) 4 (0.67)	2 (0.34) 593 (100.00)

---

* Two subjects were not included in this chart by the computer.

Figures Four through Eight portray level of experience, years of experience, and earned academic credit in terms of the selected data sources. Teachers were most active in NDEA summer institutes and publications; supervisors and administrators in the ASCD institutes and annual meetings; teacher educators in annual meetings; while the "other" category ("other" representing guidance counselors) account for the remaining data source category, NDEA academic year institutes.

Percentage-wise the most experienced subjects (10 or more years) associated with the ASCD institutes; the lease experienced subjects (1-10 years) were associated with the NDEA academic year institutes.

Again percentage-wise, the best educated subjects (masters degree plus) were associated with the ASCD institutes and the NDEA academic year institutes; the lowest level of education was apparent among subjects drawn from the NDEA summer institutes.

Figure Four: ASCD Institutes by Level, Experience, and Academic Credit

Institute	N	Level of Experience				Years of Experience				Earned Academic Credit		
		Tchrs.	S.&A.	T.E.	Other	Less than 1	1-10	10+	Other	Less than 4 yrs.	B.S.+	Masters +
Detroit	15	1	9	4	1	--	2	13	--	--	--	15
Denver	13	1	7	2	3	--	1	12	--	--	--	13
Washington, D.C.	18	1	8	4	5	--	4	14	--	--	--	18
Minneapolis	18	--	17	--	1	--	2	16	--	--	--	18
TOTALS	64	3	41	10	10	--	9	55	--	--	--	64

Figure Five: NDEA Summer Institutes by Level, Experience, and Academic Credit

Institute	N	Level of Experience				Years of Experience				Earned Academic Credit		
		Tchrs.	S.&A.	T.E.	Other	Less than 1	1-10	10+	Other	Less than 4 yrs.	B.S.+	Masters+
Virginia	15	12	2	1	--	--	7	8	--	--	9	6
Middlebury	18	11	4	--	3	--	9	9	--	--	9	9
Howard	19	11	4	1	3	--	6	13	--	--	11	8
Albright	16	11	--	1	4	--	12	4	--	--	9	7
TOTALS	68	45	10	3	10	--	34	34	--	--	38	30

Figure Six: NDEA Academic Year Institutes by Level, Experience, and Academic Credit

Institute	N	Level of Experience				Years of Experience				Earned Academic Credit		
		Tchrs.	S.&A.	T.E.	Other	Less than 1	1-10	10+	Other	Less than 4 yrs.	B.S.+	Masters+
Georgia	19	--	1	--	18	--	16	3	--	--	--	19
Buffalo	22	1	2	--	19	--	17	5	--	--	2	20
Bank Street	19	--	18	1	--	--	3	16	--	--	--	18 (1)
New York University	16	8	1	4	3	--	13	3	--	--	1	15
TOTALS	76	9	22	5	40	--	49	27	--	--	3	72 (1)

Figure Seven: Publications by Level, Experience, and Academic Credit

Publication	N.	Level of Experience				Years of Experience				Earned Academic Credit		
		Tchrs.	S.&A.	T.E.	Other	Less than 1	1-10	10+	Other	Less than 4 yrs.	B.S.+	Masters+
School Science and Math	51	24	13	4	10	1	10	38	2	--	7	44
Instructor	37	29	3	1	4	1	21	15	--	1	26	10
Elementary Engl.	53	19	15	4	15	--	15	38	--	--	14	39
National Elementary Principal	41	2	36	1	2	--	3	38	--	1	5	35
TOTALS	182	74	67	10	31	2	49	129	2	2	52	128

Figure Eight: Annual Meetings by Level, Experience, and Academic Credit

Meeting	N	Level of Experience				Years of Experience				Earned Academic Credit		
		Tchrs.	S.&A.	T.E.	Other	Less than 1	1-10	10+	Other	Less than 4 yrs.	B.S.+	Masters+
ASCD	51	--	24	12	15	--	3	46	2	1	--	50
ACEI	51	25	10	9	7	1	12	38	--	3	18	30
IRA	40	7	12	6	15	1	11	28	--	1	8	31
DESP	62	--	54	5	3	--	5	57	--	--	--	62
TOTALS	204	32	100	32	40	2	31	169	2	5	26	173

A modal portrait of the sample reveals supervisors and administrators to be the largest of the sub-groups included, about three quarters of the sample served in the field for more than ten years, and an even greater fraction possessed a masters degree or more. Hence, the sample is well-educated, experienced, and employed in numerous leadership roles.

Prevalent Practices of Entire Sample

Seven Series: Innovation Awareness. Subjects were asked to identify new practices, products, and ideas that they were aware of and that they attempted to obtain information about. Then, they were asked to relate the context of awareness and sources of information utilized.

Subjects talked about altering materials used in their practice and altering existing school organizational structures most frequently. Altering methods of instruction was another category mentioned fairly often. About forty percent of the subjects were unable to identify either initial or secondary sources of information; however, those who responded indicated publications to be most frequently used both initially and secondarily. Meetings were mentioned least frequently as sources of awareness, which seems odd given the training and experience of the sample.

Eight Series: Innovation Adoption. Subjects were asked to identify practices, products, and ideas which were adopted in their work. Then, they were asked a series of questions about the adoption process ranging from knowledge awareness through utilization.

(A Cycle)*

At least one innovation was adopted by 414 of the 595 subjects interviewed; 143 subjects adopted at least two innovations; whereas, 42 subjects adopted at least three innovations. The following account of characteristics of educational change focus upon the innovations discussed by subjects interviewed.

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*See page 33 for explanation of cycles.

1. Innovations which were adopted or modified for local use were most frequently described. Innovations which were ready-made somewhere else were mentioned next often. While innovations which were originated by the innovator were mentioned least frequently.

2. Subjects became aware of the innovations discussed three or more years earlier or one to three years prior to adoption. More than 20% of the subjects couldn't recall the time of initial awareness in conjunction with the first innovation discussed. This figure increased to more than 25% of the subjects in conjunction with the second innovation discussed. More than 45% of the subjects who discussed a third innovation couldn't recall the time of initial awareness.

3. Innovations which were externally generated (outside the environ of the subjects interviewed) by some other party served as the source of most of the practices, products, and ideas discussed. This source accounted for about 60% of the responses offered.

4. Simple substitution accounted for more than half of the innovative interventions within target settings described. Minor alterations in practice accounted for 27% of the responses. Major alterations in practice accounted for 8% of the responses.

5. Among reasons offered for changing practice, the two most frequently offered were dissatisfaction with current practice or a desire to expand current practice. The former accounted for 47%, whereas the latter accounted for 40% of the responses.

6. Innovations described were used by the subject and his immediate associates (44% of the responses); by the subject only (28%); and by numerous colleagues beside the subject (25%).

7. Insofar as the status of innovations adopted is of interest, 48% of the subjects planned to continue using them after modifications are made, 37% planned to continue using them in the existing manner, whereas 12% were uncertain about future plans.

(B Cycle)

1. Sources of awareness of innovations adopted vary considerably. Approximately 37% of the subjects identified personal,

direct involvement (via colleague contact, workshops, institutes, courses, etc.) as the source of awareness; 24% indicated the innovation was personally conceived; whereas 16% indicated nondescript sources (publications, broadcasts, etc.). A variety of responses accounted for the remaining variance.

2. Sources used to extend interest in the innovations discussed included personal, direct involvement as mentioned above (39% of the responses) and nondescript exposure (30%). Again, a variety of responses accounted for the remaining variance.

3. Most of the subjects offered practical reasons as the basis for trying out the innovations discussed in their work.

4. Nearly half of the subjects (49%) indicated no trial period was employed during the course of innovation adoption. Of the remaining subjects, 34% formed impressions of the innovations based upon observations alone.

5. Most of the subjects offered practical reasons as the basis for adopting the innovations discussed within their work.

(C Cycle)

1. Most subjects (89%) did not relate innovations discussed to diffusion strategies of interest to this study. In fact, only 6% related innovations discussed directly to diffusion strategies of interest.

2. As mentioned previously, personal, direct involvement was most frequently mentioned, with nondescript sources mentioned second in frequency as diffusion strategies of importance to subjects who described innovations. (3. & 4. This response pattern was maintained insofar as the style of diffusion strategies recognized by subjects as important contributors to both awareness and interest).

5. The duration of diffusion strategies didn't appear to be an important variable considering subject awareness of innovations. The modal response to this question was the "other" category. Frequencies of additional responses included less than one week (26%), subject involvement uncontrolled (22%), and less than one year (13%).

6. The duration of diffusion strategies did seem to influence subject interest in innovations. Two responses, less than one week (36%) and subject involvement uncontrolled (34%), accounted for the majority of responses to this item.

7. & 8. Perhaps the only meaningful information compiled about audience participation in diffusion strategies recognized by

> subjects as important contributors to both awareness and interest in innovations discussed is the revelation that large group participation (N = 50 or more participants) was rarely mentioned.

Nine Series: Innovations Earmarked for Adoption. Subjects were asked to identify practices, products, and ideas which they intend to adopt in their work. Then, they were asked a series of questions about the adoption process ranging from knowledge awareness through plans for utilization.

(A Cycle)

At least one innovation was earmarked for adoption by 277 of the 594 subjects who responded; 50 subjects planned to adopt at least two innovations; whereas, 10 subjects planned to adopt at least three innovations. The following account of characteristics of educational change focus upon the innovations discussed by subjects interviewed.

Responses to questions raised parallel those offered in conjunction with the A Cycle under the Eight Series. No stark departures in the data were noted.

(B Cycle)

Responses to questions raised parallel those offered in conjunction with the B Cycle under the Eight Series with one minor exception. Insofar as evidence gathered during a trial period used to study innovations of interest, 38% of the subjects formed impressions of the innovations based upon observation alone, 12% acquired descriptive data about the innovations, whereas 41% indicated no trial period was employed during the course of planning to adopt the innovations. In this instance, more subjects made an effort to obtain pilot data as part of the innovation adoption process.

(C Cycle)

Responses to questions raised parallel those offered in conjunction with the

C Cycle under the Eight Series. No stark departures in the data were noted.

Ten Series: Innovations of Interest but Not Adopted. Subjects were asked to identify practices,products, and ideas which they wanted to adopt in their work, but for some reason were prevented from doing so. Then, they were asked a series of questions about the adoption process ranging from knowledge awareness through reasons for failure to adopt innovations of interest.

(A Cycle)

An attempt was made to adopt at least one innovation by 377 of the 595 subjects who responded; 109 subjects tried to adopt at least two innovations; whereas, 27 subjects tried to adopt at least three innovations. The following account of characteristics of educational change focus upon the innovations discussed by subjects interviewed.

Responses to questions raised parallel those offered in conjunction with the A Cycle under the Eight Series. No stark departures in the data were noted.

(B Cycle)

Responses to questions raised parallel those offered in conjunction with the B Cycle under the Eight Series with two minor exceptions. First, more subjects personally conceived innovations described in this category than in either previous categories; however, the difference is not stark. And second, nondescript sources were used to extend interest more often than personal, direct involvement by subjects in this category. In this instance, the difference was greater.

(C Cycle)

Responses to questions raised parallel those offered in conjunction with the C Cycle under the Eight Series. No stark departures in the data were noted.

There was a question raised in this category not previously asked which focused upon reasons for failing to adopt innovations discussed. Reasons offered included inadequate financial support (35% of the responses); lack of support from colleagues (20%); and, needed raw materials or technology unavailable (11%). Quite a few "no responses" were recorded for this survey item. No clear-cut reasons can be offered to account for this response.

Eleven Series: Sources of Information. Subjects were asked to note the influence of selected information sources upon their knowledge of educational innovations in general.

1. More than two-thirds (68%) of the subjects mentioned diffusion strategies of interest to this study and regarded them as important sources of information. About 20% of the subjects made no reference to diffusion strategies of interest to the study.
2. Diffusion strategies regarded by subjects as important sources of information in rank order of importance were nondescript sources, personal but passive involvement sources, and personal but direct involvement sources.
3. Values ascribed to nondescript sources in rank order of importance included (a) exposure to information not directly related to practice; (b) exposure to information to be used in practice; and (c) exposure to innovations.
4. Values ascribed to personal but passive involvement sources in rank order of importance parallel the response to item number three, nondescript sources.
5. Values ascribed to personal but direct involvement sources in rank order of importance included (a) exposure to information to be used in practice; and (b) exposure to information not directly related to practice.

Influences of Role, Experience, and Training Upon Practice

Analyses of frequency counts of subjects' responses considering role, experience, and training, didn't reveal any stark variations from the pattern of prevalent practices reported for the entire sample. Variations uncovered are described by question series employed during the interview.

Seven Series: Innovation Awareness.

No variations were noted.

Eight Series: Innovation Adoption.

(A Cycle)

Generally speaking, responses of teachers varied from the pooled responses of administrators, supervisors, and teacher educators, just as responses of bachelors degree holders varied from the responses of masters degree plus holders. Teachers and bachelors degree holders responded more conservatively, less imaginatively, and adhered more closely to conventional practice, than other subjects.

(B Cycle)

The "teacher educator" sub-group stood out in this cycle in two respects: first, they personally conceived more innovations than other subjects; and second, they based impressions of innovations upon observation rather than ignore a trial stage as did most other subjects. Otherwise, responses were quite compatible.

(C Cycle)

No clear-cut patterns or variances were apparent in this cycle.

Nine Series: Innovations Earmarked for Adoption.

(A Cycle)

Again, the "teacher education" group varied from the general pattern in one respect -- innovations discussed were originated personally much more frequently than for the sample as a whole.

(B Cycle)

No variations beside the second of those mentioned in conjunction with the Eight Series, B Cycle.

(C Cycle)

No clear-cut patterns or variances were apparent in this cycle.

Ten Series: Innovations of Interest But Not Adopted.

(A Cycle)

The "teacher education" sub-group varied as in the Nine Series, A Cycle.

(B Cycle)

In response to the probable source of awareness of innovations discussed, both the "teacher education" and the "administration/supervision" sub-groups treated personally conceived innovations most frequently, whereas teachers identified personal, direct involvement sources as fountainheads of innovation awareness. Also, subjects in the former category were better educated and more experienced than subjects in the latter category. This same breakdown occurred as subjects sought sources to extend interest in innovations mentioned with one variation. Those who personally conceived innovations now relied upon nondescript sources (publications, broadcasts, etc.).

(C Cycle)

No clear-cut patterns or variances were apparent in this cycle.

Eleven Series: Sources of Information.

No variations were noted.

Prevalent Practices of Subjects Considered in Terms of Sources of Data

Five sources of data were considered, namely, ASCD regional institutes, NDEA summer institutes, NDEA academic year institutes, publications, and annual meetings of professional associations. Analyses of frequency counts of subjects' responses, considering these sources, didn't reveal any stark variations from the pattern of prevalent practices reported for the entire sample. Variations among the five sources are described by question series employed during the interview.

Seven Series: Innovation Awareness.

No variations were noted.

Eight Series: Innovation Adoption.

(A Cycle)

Subjects in the publications category differed from the others on the nature of innovations identified; that is, they discussed innovations ready-made somewhere else. The others discussed something adopted or modified for local use. NDEA summer institute participants planned to use innovations only in their own practice, whereas the others extended their sphere of influence to immediate associates as well.

(B Cycle)

ASCD institute participants used impressions based upon observation as a trial; all the others revealed no trial was apparent.

(C Cycle)

All groups are in agreement on personal, direct involvement type diffusion strategies; no pattern emerges on duration of diffusion strategies; whereas, all agree on individual or small group strategies as the preferred audience participation level.

Nine Series: Innovations Earmarked for Adoption.

(A Cycle)

Subjects in both the publications and NDEA summer institutes categories discussed innovations ready-made elsewhere, as contrasted with the modal response.

ASCD institute participants varied from the others on the nature-of intervention in the target setting in that they described innovations requiring minor alteration in practice rather than simple substitution. They also varied on the innovations' use within target settings in that they described innovations used by numerous practitioners rather than by the innovator and immediate associates.

(B Cycle)

ASCD institute participants relied upon nondescript sources to extend interest in innovations discussed; all others relied upon personal, direct involvement sources.

(C Cycle)

ASCD institute participants relied upon nondescript sources as the style of diffusion strategy most apt to generate awareness of innovations; all others relied upon personal, direct involvement sources.

Ten Series: Innovations of Interst But Not Adopted.

(A Cycle)

Subjects in both the publications and NDEA summer institutes groups continue to describe innovations ready-made somewhere else. Similarly, ASCD institute participants described innovations requiring minor alterations in practice (a substantial number also described major alterations in practice).

(B Cycle)

An interst note here is the modal response to the nature of innovations identified, namely, they were originated by the innovator rather than ready-made elsewhere or modified prior to use.

(C Cycle)

The style of diffusion strategies recognized as important contributors to interest in innovations discussed changes from personal, direct involvement sources to nondescript sources here.

Eleven Series: Sources of Information.

No variations were noted.

Data treated thus far focused upon total sample responses to questions raised by the study interviewers. The researchers wished to contrast verbal responses of the most and the least innovative subjects, so they developed a scheme to select the fifty most and the fifty least innovative individuals. A subject "earned" points for each innovation adopted (9 points), for each innovation about to be adopted (4 points), and for each innovation attempted but not adopted (1 point). The computer totaled these points for each subject, then rank ordered all the subjects by score from the highest to the lowest. This simple scheme permitted the selection of fifty individuals who described noteworthy changes in their practices and fifty individuals who described rather stable practices.

These data served as the basis for two additional investigations. The first focused upon prevalent practices of the most and the least innovative subjects. The second examined characteristics of subjects exposed to the most and least innovative information sources. Each investigation draws much of its analytic strategy from work reported by rural sociologists. Both studies are summarized on the following pages.

PREVALENT PRACTICES OF THE MOST AND LEAST INNOVATIVE SUBJECTS

The Problem. The problem that this investigation concerned itself with was whether findings of rural sociologists concerning the age and sources of information could be paralled using educators rather than farmers. Six specific hypotheses were constructed for investigation:

1. The arithmetic average of the age of innovative educators is less than the arithmetic average of the age of laggard educators.
2. Innovative educators will mention, specifically, a greater number of impersonal sources of information than they will mention personal sources of information in regard to their knowledge of innovative ideas, products, or practices.
3. Laggard educators will mention, specifically, more personal sources of information than they will mention impersonal sources of information in regard to their knowledge of innovative ideas, products and practices.
4. Innovative educators will mention, specifically, more cosmopolite sources of information than they will mention localite sources of information in regard to their knowledge of innovative ideas, products and practices.
5. Laggard educators will mention, specifically, more localite sources of information than they will mention cosmopolite sources of information in regard to their knowledge of innovative ideas, products and practices.
6. Innovative educators will mention, specifically, a greater number of information sources than will laggard educators in regard to their knowledge of innovative ideas, products or practices.

The extent to which the work of the rural sociologists, in regard to age and sources of information of farmers, had any validity for educators was determined by whether each of the six hypothesis was accepted or rejected in the course of this study.

Studies concerned with the age and sources of information of innovators (and by implication, this term includes non-innovators) have a long history in the field of rural sociology, and a rather short and sketchy history in the field of education.

Rural sociological studies on age [(Ryan and Gross, 1943) (Copp, 1956) (Lionberger and Coughenour, 1957) and others] and on sources of information [(Copp, Sill and Brown, 1956) (Wilkening, 1952) (Rogers and Burdge, 1961 and 1962)] have established precedent for procedures used in this study. The use of the personal field interview is a time-honored one in rural sociology; it is not a common technique in education, where survey studies have tended to be of the mailed questionnaire variety. Secondly, rural sociological studies have defined the parameters of the main information categories used in this study (Rogers, 1962, Chapter VI) and have provided a basis for the sub-categories used in this study (Copp, Sill and Brown, 1958) (Rogers and Beal, 1958) (Beal and Behlen, 1957).

Very little has been done by educators to investigate the sources of information used by innovators, although several studies have investigated the age of innovators, with conflicting results. (Bridges and Reynolds, 1968) (Wygal, 1966) (Leas, 1962).

The subject, procedures, and methods of this study, then, have ample precedent in the field of rural sociology. This study was not intended to be conclusive or definitive, but to be a sign post at what is hoped will be the beginning of a road of investigation into the characteristics of educators which will be as extensive as the highway that has been constructed by rural sociologists in regard to the characteristics of farmers.

The researchers' original intent was to contrast the behavioral patterns which emerged for the fifty most* and fifty least innovative subjects interviewed. Unfortunately, the fifty least innovative subjects didn't adopt any innovations; didn't plan to adopt any, and didn't even offer suggestions that they once tried but failed as innovators. So, comparisons were not possible using innovative activity as a variable.

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*Actually 52 subjects were included by the computer.

Population. Analyses were based upon forty-one innovative subjects; forty-three non-innovative subjects; or, a total of eighty-four subjects. Originally, fifty two innovative subjects and fifty non-innovative subjects were selected on the basis of the previously-mentioned arithmetic scores indicating amount of innovativeness. The difference between original selection and actual usage can be attributed to the amount of useful information stored on the audio tapes. Any tape lacking complete and clear information, either through technical or interview failure, was discarded from the sample used.

The innovative population included sixteen teachers, sixteen administrators, seven teacher educators, and two persons from fields closely related to education who had been educators; the laggard population included eighteen teachers, sixteen administrators, six teacher educators, and three persons from fields closely related to education who had been educators.

Population by Role

	Innovators	Laggards
Teachers	N = 16	N = 18
Administrators	N = 16	N = 16
Teacher Educators	N = 7	N = 6
Other	N = 2	N = 3

The age of the population was distributed as follows: eight innovators and four laggards in the 20-29 year old group; seventeen innovators and twelve laggards in the 30-39 year old group; eight innovators and ten laggards in the 40-49 year old group four innovators and eight laggards in the 50-59 year old group; and 60 years old and above.

Age Distribution of Innovators and Laggards

Years Old	Innovators	Laggards
20-29	N = 8	N = 4
30-39	N = 17	N = 12
40-49	N = 8	N = 10
50-59	N = 4	N = 8
60-	N = 4	N = 9

The Data. Each of the eighty four subjects' audio tapes was studied intensively. An instrument was designed to facilitate extracting sought after information from the tapes in a standard manner. In this way descriptive information was categorized and then summarized.

Each tape was coded prior to analysis, so that systematic bias might be avoided during the data analysis. Only after all the tapes had been reviewed were the resultant checklists unscrambled and placed in either the innovative or the non-innovative category.

The following ground rules were agreed upon prior to the analyses of the tapes:

1. To determine the age of the subject, the number of years of various types of experiences will be added to a base number of 23. The number 23 was chosen arbitrarily to represent the average age of an educator at the time he begins his professional career.

2. Personal vs. impersonal sources: Personal sources will be those educational and non-educational associates specifically mentioned by the subject as an influential source for his knowledge of an innovative idea, practice or product. Impersonal sources will be those publications or other media specifically mentioned by the subject as an influential source on his knowledge of an innovative idea, practice or product.

3. Localite vs. cosmopolite sources. A cosmopolite source can be either a brief or extended assemblage but it must meet the criteria of being external to the subject's social system. In this case, the subject's social system will be considered his professional environment; i.e., school system or college. A localite source is any brief or extended assemblage held within the subject's social system.

Frequency counts of subjects' responses to specific questions were portrayed in tabular form to contrast the innovators and non-innovators groups. These summarized data were used to test hypotheses set forth.

Discussion of Data. Data is discussed in relation to each of the hypotheses set forth: the hypothesis is offered, supportive data is offered, and conclusions are derived.

Theory one. Innovators are generally younger than laggards. (Specific hypothesis: the arithmetic average of the age of innovative educators is less than the arithmetic average of the age of laggard educators.)

The two groups, innovators and laggards, were compared in terms of mean age. Considering the conflicting results of other studies along this line, the difference in the arithmetic average of the two groups (5.6 years) was surprising.

Since the composition of the two groups of educators is almost identical in terms of role, the difference in mean average would not seem to be linked to role of the subject. It is interesting to note that the distribution of age demonstrates a progressive reversal of innovator-laggard category. The 20-29 year old group has twice as many innovators as laggards (8-4) while the 60 and above group has twice as many laggards as innovators (9-4). It would seem then, that the general hypothesis, that innovators are generally younger than laggards, is as true for the educators of this sample as rural sociologists claim it to be true for farmers.

A word of caution is in order based on Rogers who found that innovators often were not asked about their innovations until long after they had completed the innovative behavior. It may be, then, that the innovators of this study are even younger, at the time of their innovative behavior, than appears.

Theory two. Impersonal sources of information are more important than personal sources of information for innovators than for laggards. (Specific hypothesis two: Innovators will mention, specifically, a greater number of impersonal sources than they will mention personal sources of information in regard to innovative ideas and practices. Specific hypotheses three: Laggards will mention, specifically, more personal sources of information than they will mention impersonal sources of information in regard to innovative ideas and practices.)

While innovators, as predicted by the rural sociologists, relied more on impersonal sources of information than on personal sources of information, thus confirming specific hypothesis two, laggards unexpectedly did the same, rejecting specific hypothesis three. The latter result, which differs from the findings of the rural sociologist, may be due either to a difference in the nature and habits of educators, as compared to farmers; or due to a weakness in the study.

It may be possible to speculate that impersonal sources, as defined in this study and in rural sociological studies, are inherently more a part of an educator's life than their counterparts might be with farmers. Educators probably belong to more professionally oriented groups, all of which have publications which are distributed with membership. In addition, educators by nature of their work, are probably more print-minded than farmers. It is interesting to note in this regard that "professional interest magazine" is the most popular sub-category for both innovators and laggards. The high response in this category may be the result of the phrasing of the interview question, which mentioned journals as a specific possible answer, but it is more probably the result of the fact that most educators belong to magazine publishing professional organizations.

It is also interesting that innovators mentioned a greater total number of personal and impersonal sources than did laggards. While the investigator has no way of knowing to what extent the mentioned sources affect innovation, the higher number of sources mentioned by innovators in both categories may indicate a greater awareness of innovation.

Thus, while impersonal sources of information are more important than personal sources for innovators, this study also indicates that impersonal sources are also more important than personal sources for laggards. Further work needs to be done to determine whether the importance of impersonal sources for laggard educators is a natural outgrowth of their profession.

The popularity of the sub-categories of personal and impersonal sources are of interest. The marked popularity in the personal source category of teachers and administrators, and to a lesser extent supervisors, reflects the dominant effect of the peer group for both innovators and educators, a finding which might warrant attention by educational researchers, and a matter which has concerned rural sociologists in their studies. The low rate of reference to university persons and representatives of state departments of education may be worth pursuing also, especially for those worthies of both groups who believe they are influential in affecting educators. Of interest also is the relatively high rate of mention by innovators of neighbor/friend and parents of students. Innovators undoubtedly feel a more wide-ranging influence for sources of information than do laggards.

This is true for impersonal sources also. Innovators see as influential a more far-ranging group of categories than do laggards. Even so, it is evident that according to the results of this study, the predominant information sources for educators are professional magazines. Of particular interest is the low rating of what in some circles is the most influential media of our age - television. Whether this is because educators are print-oriented, or because television is not fulfilling its promise, is left to the reader's conjecture, and hopefully, further study.

Theory three. Cosmopolite sources of information are more important than localite sources of information for innovators than for laggards. (Specific hypothesis four: Innovators will mention, specifically, more cosmopolite sources of information than they will mention localite sources of information in regard to innovative ideas and practices. Specific hypothesis five: Laggards will mention, specifically, more localite sources of information than they will mention cosmopolite sources of information in regard to innovative ideas and practices.

While innovators, as expected, did mention more cosmopolite sources of information, thus confirming specific hypothesis four, laggards mentioned almost exactly the same ratio of cosmopolite sources to localite sources as did innovators, thus rejecting specific hypothesis five. However, though fewer in number, innovators mentioned a far greater number of cosmopolite sources than did laggards, indicating to some extent that such sources were more important to them than to laggards.

The findings of this study in regard to this hypothesis were undoubtedly influenced by the fact that the interview inventory was weighted against localite responses. The interviewer, to clarify the question put to the subject, used examples of brief assemblages (annual conferences and institutes) that gave the interviewer a mind set away from what this study considered as "localite sources". Responses were thus weighted in favor of cosmopolite types of meetings.

In spite of this, localite sources were mentioned by both groups, and were mentioned more frequently by laggards (16%) than by innovators (13%). Unfortunately, the total number of responses in the "localite" sub-category precludes any attempt at making a definitive judgment regarding the relative importance of localite sources for innovators and laggards. For both groups, system meetings was the category that drew most response. Nevertheless, the fact that laggards mentioned localite sources more frequently than did innovators may be an indication that they consider such sources more important than do innovators, and should be pursued in further studies.

Of note in regard to responses to the category of cosmopolite sources is the high incidence in both innovative and laggard groups of "national meeting in professional speciality" as a source of information. This can be partially accounted for by the fact that the subjects for the original Kettering study were drawn from lists of persons attending this type of meeting. However, the same was true of lists of those attending NDEA institutes, yet innovators see this as a much more important source (48%) than do laggards (12%). State meetings are also prominent sources of information for both groups. Innovators see university course work as a much more important information source (46%) than do laggards (23%). This, coupled with the incidence of NDEA institutes as sources of information, lends evidence to the theory of rural sociologists that innovators utilize those sources that require greater effort.

Theory four. Innovators utilize a greater number of information sources than do laggards. (Specific hypothesis six: Innovators will mention a greater number of information sources in regard to innovative ideas and practices than will laggards.)

Innovators mentioned a higher total number of sources of information and a higher average number of information sources than did laggards, thus confirming the hypothesis held by the rural sociologists. A breakdown of the population by role finds innovators mentioning more sources than laggards in every role category with innovative teacher-educators mentioning the most sources per individual, followed by innovative administrators, laggard administrators, innovative teachers, laggard teacher educators, and laggard teachers. There is undoubtedly a positive connection between role and information sources for educators, just as there is a positive connection between degree of innovativeness and information sources. This connection may be traced to the fact that the active attitude which causes an individual to rise in his profession also causes him to seek out sources of new ideas, or it may be that those more highly placed in the profession have by virtue of their role a greater accessibility to information sources.

Conclusions. On the basis of this study, innovative educators would appear to by younger in age than laggard educators, and would seem to utilize a greater number of information sources than do laggard educators. In addition, innovative educators find impersonal sources of information of more importance to them than personal sources of information, and they utilize localite sources of information to a lesser extent than they utilize cosmopolite sources of information.

While the above findings are those predicted by the research done in rural sociology, educators failed to behave as predicted in two regards. Although laggard educators differ markedly from their innovative colleagues in respect to age and total number of sources used, they are similar to their innovative colleagues in that they mention impersonal sources of information, and utilize localite sources of information to a lesser extent than cosmopolite sources. It should be pointed out, however, that overall, laggard educators mention cosmopolite sources less than do innovators, thus perhaps hinting at a confirmation of the theory of the rural sociologists that innovators tend to be more cosmopolite than laggards.

The study also provides some interesting perspectives in regard to specific sources of information mentioned by both innovators and laggards, both of which groups tend to hold the same information sources in the highest regard. The fact that publications of special professional interest seemed most influential in the minds of both groups as sources of information; that fellow professionals were so often important as sources of information for both groups; that outside or cosmopolite influences such as commercial representatives, outside speakers, personal visitations and university persons were not mentioned frequently by either group; all these may indicate a reason for the slowness of the change process in education, in that it hints at a parochial, in-house influence in respect to the forces of change. While this is not surprising in regard to the classroom teacher, who is often doomed to spend his professional life within the four walls of his assigned teaching station without benefit of a travel expense budget, it does raise serious questions concerning the influence of such organizations as schools of education and commercial enterprises to effect change in education under present conditions. If one additionally considers the fact that the educators chosen for this study were picked from lists of "cosmopolite" sources, such as national meetings and institutes, and were thus prone to mention such meetings as sources of information, one can only imagine that educators not chosen from such lists would turn out to be even more parochial in regard to the information sources they might mention.

Undoubtedly the orientation of educators to reading, and their membership in professional groups which publish magazines, caused the subjects of this study, particularly the laggard group, to cite special interest magazines as important sources of information. In addition, because educators so often find themselves in such close proximity to their fellow professionals, often working for years in the same building, it is not surprising that they should mention fellow educators as important sources of information.

Of additional interest is the apparent importance of the educator's specific professional field as a vehicle of interest. Meetings and institutes mentioned most frequently were those of specific nature, either having to do with the discipline or area taught by the subject, or having to do with a subject's professional position, such as meetings of administrators, or meetings of principals.

CHARACTERISTICS OF SUBJECTS EXPOSED TO THE MOST AND LEAST INNOVATIVE INFORMATION SOURCES

The Problem. Twenty-one different information sources were initially selected for study. After categorizing data obtained, five of the twenty-one sources that accounted for the most innovative subjects in the sample and five of the twenty-one sources that accounted for the least innovative subjects in the sample were pooled for comparative analysis. Sources accounting for the most innovative subjects were three ASCD Regional Institutes (at Detroit, Washington, D.C., and Minneapolis), one NDEA Academic Year Institute (at the University of Georgia), and one publication (The National Elementary Principal). Conversely, three NDEA Summer Institutes (at the University of Virginia, Howard University, and Albright College), and two publications (The Instructor and School Science and Mathematics) accounted for the least innovative subjects.

Three specific hypotheses were set forth prior to analyzing the above-mentioned groupings of most and least innovative subjects:

1. Impersonal information sources are most important at the awareness stage and personal sources are most important at the evaluation stage.
2. Cosmopolite information sources are most important at the awareness stage and localite information sources are most important at the evaluation stage.
3. The five-stage adoption concept (awareness, interest, evaluation, trial, and adoption) is valid in the field of education.

These hypotheses were based upon models drawn from the field of rural sociology.

Many studies in this tradition have attempted to determine the relative importance of various information sources at different stages in the adoption process. Two generalizations of particular interest are discussed in the following paragraphs.

The first generalization pertains to personal and impersonal communication. Personal communication involved direct face-to-face contact between the communicator and the receiver (Rogers and Beal, 1958). The term "personal sources of information" and "personal influence" are used somewhat interchangeably although it is recognized that this is not completely consistent with their meaning. Communication is the way in which influence is spread (Hovland, 1953, p. 182).

Impersonal communication does not involve direct face-to-face exchange between the communicator and the communicatee. Impersonal communications nearly always are spread via a mass communication medium. They function as rapid, one-way dispensers of information. Mass communications are most effective at calling various decision alternatives to the initial attention of individuals. Because of their "mass" nature, they cannot be beamed at a specialized or local audience. In short, impersonal information sources are best able to create awareness of an idea(Deutschman and Danielson, 1960).

A generalization supported by many studies in rural sociology is that impersonal information sources are most important at the awareness stage, and personal information sources are most important at the evaluation stage in the adoption process (Wilkening, 1956; Copp and others, 1958; Rogers and Beal, 1958). In short, people would rather believe people than facts (Boddewyn, 1961).

A second generalization about information sources by adoption stage involves the cosmopoliteness of information sources. Cosmopoliteness is the degree to which an individual's orientation is external to a particular social system. Not only do individuals range along a cosmopoliteness-localiteness dimension, but information sources may be classified as to their degree of cosmopoliteness (Campbell, 1959). Cosmopolite information about innovations comes from outside the social system, while other information about new ideas reaches the individual from sources inside the system or in a localite fashion.

Cosmopolite information sources are most important at the awareness stage, and localite information sources are most important at the evaluation stage. This generalization is supported by the findings of Wilkening and others (1960). The findings of both Ryan and Gross (1943) and Katz (1961) suggest that cosmopolite communications are more important for the first members of a social system to learn of a new idea. Information about innovations usually emanates from sources external to the system. When the idea gains adherents in the system, localite sources are widely available to persons who are relatively later in hearing about an idea. The hybrid corn investigation also indicates that farmers who became aware of the idea relatively late were more likely to learn of the innovation from personal sources.

In this study, educators are the subject matter rather than farmers or physicians. The study is descriptive in nature and was undertaken to determine the relative importance of various information sources at each stage of the adoption process to a cluster of innovators and to a cluster of non-innovators.

Population. Analyses were based upon one hundred ten innovative subjects; one hundred thirty-nine non-innovative subjects; or, a total of two hundred forty-nine subjects. These two pools are broken down by sub-sample as follows:

The Most Innovative Subjects

1. ASCD Institute, Detroit, Mich. - N = 15
2. ASCD Institute, Washington, D.C. - N = 18
3. ASCD Institute, Minneapolis, Minn. - N = 18
4. NDEA Academic Year Institute, University of Georgia - N = 19
5. The National Elementary Principal (publication) - N = 40

Total N = 110

The Least Innovative Subjects

1. NDEA Summer Institute, University of Virginia - N = 15
2. NDEA Summer Institute, Howard University - N = 19
3. NDEA Summer Institute, Albright College - N = 16
4. The Instructor (publication) - N = 37
5. School Science and Mathematics (publication) - N = 52

Total N = 139

GRAND TOTAL = 249

Since the source is of prime concern, subjects are not broken down into specific role specifications.

The Data. Each of the two hundred forty nine subjects' audio tapes was studied intensively. An instrument was designed to facilitate extracting sought after information from the tapes in a standard manner. In this way descriptive information was categorized and then summarized.

Decision making or judging concerning the data gathered by the researcher involved adherence to operational definitions constructed by the researcher. These definitions serve as the framework within which categorization of particular information sources took place.

The operational definitions considered in the judging process were:

1. Personal Information Source

   Judged as any educational or non-educational associate mentioned by the subject of this study as an influential source for his knowledge of an innovative idea, product, or practice.

2. Impersonal Information Source

   Judged as any publication or other media specifically mentioned by the subject of this study as an influential source of his knowledge of an innovative idea, product, or practice.

3. Cosmopolite Source

   Judged as any assemblage mention by a subject of this study as an influential source for his knowledge of an innovative idea, product, or practice which is external to the subject's social environment.

4. Localite Source

   Judged as any assemblage mentioned by a subject of this study as an influential source for his knowledge of an innovative idea, product, or practice which is an integral part of the subject's social environment.

The audio-tapes were reviewed by the researcher so that he had no prior knowledge of the original sample source while making judgments about the subject's responses. Later the tapes were unscrambled to report relevant relationships.

Seven tapes were discarded for a variety of reasons. This resulted in a total N of 242 composed of 108 most and 134 least innovative subjects. From these 242 subjects, analyses revealed only 163 subjects had actually adopted at least one innovation during the study period. Hence, usable data were in effect for 106 most and 57 least innovative subjects.

Discussion of Data. Data is discussed in relation to each of the hypotheses set forth: the hypothesis is offered, supportive data is offered, and conclusions are derived.

Hypothesis One. Impersonal information sources are most important at the awareness stage and personal information sources are most important at the evaluation stage.

The data analysis pertaining to this hypothesis resulted in the following: Among the sample accounting for the most innovative subjects, 70.2% mentioned personal information sources at the awareness stage and 90.3% of these subjects mentioned personal information sources again at the evaluation stage. Hence, personal information sources were most important at both the awareness stage and the evaluation stage of the adoption process.

Among the sample accounting for the least innovative subjects, personal and impersonal information sources were mentioned an equal number of times at the awareness stage, whereas at the evaluation stage personal sources were mentioned 96.2% of the time.

In general these findings do support the theories of rural sociologists with regard to the importance of personal information sources at the evaluation stage. The reasons as summarized by Rogers (1962) and others involve the fact that personal communication is important at the evaluation stage where mental judgment of the innovation is made because:

1. Personal communication allows a two-way exchange of ideas. The communicatee may secure clarification or additional information from the communicator.
2. Personal communication is likely to influence behavior as well as transfer ideas. In most cases persons who interact have similar ideas, values and attitudes and may be important reference groups to one another. Mass communications

seldom affect decisions directly although they may operate through an intervening variable of group interaction to cause changes in behavior.

3. Greater accessibility and credibility may be cited as reasons for the importance of personal information sources of the evaluation stage. When the source is well known it is more likely to be regarded as trustworthy.

The findings with regard to impersonal information sources at the awareness stage were inconsistent with the generalization put forth by the researcher. Among the sample accounting for the most innovative subjects, impersonal information sources were mentioned with less frequency at the awareness stage than personal sources. Impersonal sources were, however, mentioned 59.4% of the time at the interest stage. This would seem to indicate that initial awareness was developed through personal sources, mainly peer group associates, but that knowledge about the innovation was sought out through reading.

Among the sample accounting for the least innovative subjects, personal and impersonal sources were mentioned an equal number of times at the awareness stage and therefore no conclusion about source importance could be drawn. This group did, however, mention impersonal sources 52.8% of the time at the interest stage to reinforce sources were most important at the interest stage.

In light of the popularity of personal information sources at the awareness and evaluation stage, it appears that personal contact may have greater effectiveness in the face of resistance or apathy on the part of the target audience. A study by McKain and others (1958, p. 2) of a campaign to influence the milk consumption of older persons indicated that personal influence from a change agent was particularly effective in securing adoption of an idea among lower status persons. Moreover, impersonal information sources can usually be more easily avoided or ignored than personal ones. An example of this point comes from a sociometric study of Missouri farmers by Lionberger (1955, p. 32). He found the "non-receptive farmers" (those who opposed most farm innovation) readily sought information and advice from farmers who, in turn, were highly receptive to innovation. Lionberger concluded, "It is thus obvious that interpersonal sources provided low resistance avenues for farm information which is not accepted when coming from more direct institutionalized agencies."

Specifically with regard to Lionberger's findings, this study yielded data concerning subjects' utilization of personal information sources by specific sub-category. Among the sample accounting for the most innovative subjects, composed mainly of administrators, teachers were mentioned most frequently, followed by administrators. Among the sample accounting for the least innovative subjects, composed mainly of teachers, administrators were mentioned most frequently, followed by teachers.

This noticeable popularity of administrators and teachers indicates the great degree of influence peer groups have on one another. Moreover, there should be concern for the absence of reference to Representatives of the State Department and the low rate of reference to University persons, parents, neighbors, and friends.

With regard to impersonal sources by sub-category, the noticeable popularity of professional magazines indicated their influence as impersonal information sources but perhaps of more concern is the low rate of reference to television, books, and newspapers.

Hypothesis Two. Cosmopolite information sources are most important at the awareness stage and localite information sources are most important at the evaluation stage.

Among the sample accounting for the most innovative subjects, at the awareness stage subjects mentioned cosmopolite sources all of the time while at the evaluation stage cosmopolite sources were not mentioned at all. Localite sources are mentioned only at the interest stage (3 times).

Among the sample accounting for the least innovative subjects, cosmopolite sources were mentioned most frequently at the awareness stage while at the evaluation stage cosmopolite sources were not mentioned at all. Localite information sources were mentioned at the awareness stage and only a few times.

The cosmopolite-localite generalization is supported in rural sociology by the findings of Wilkening and others (1960). The study reported by these researchers dealt with data obtained from 148 farm housewives residing in one Iowa community. It focused upon sources of information used in adopting a "miracle fabric". The sources were classified as (1) cosmopolite or outside of the community, or (2) localite, or inside of the community. Their findings produced the generalization: Cosmopolite sources were most important at the awareness stage and localite sources play their greatest role at the evaluation stage.

This study, however, produced results pertaining to the cosmopolite-localite dimension which were inconsistent with the findings of rural sociologists. Although cosmopolite information sources were found to be important for both groups at the awareness and interest stages, localite sources were not mentioned at the evaluation stage. Specifically, localite sources were mentioned only six times by the subjects in both sample groups. Unfortunately, the low number of responses in this category made it difficult to make any judgments concerning the relative importance of localite sources for both sample groups and the conclusion drawn is that localite sources were not influential.

This study has determined that innovators utilize cosmopolite information sources more than any of the other sources actively considered. Among both groups in the sample, cosmopolite sources were mentioned specifically more than any of the other major categories. Perhaps this is because the innovators' reference groups are more likely to be outside rather than within their social system. They traveled and were interested in affairs beyond the boundary of their social system. Moreover, the cliques and formal organizations to which innovators belonged are likely to include other innovators as their members. This further substantiates earlier findings (Ross, 1958) that teachers at more innovative schools were relatively more likely to get new ideas from outside their community.

Hypothesis Three. That the five-stage adoption concept (awareness- interest- evaluation- trial- adoption) is valid in the field of education.

In the analysis of hypothesis number three, the process consisted of computing the number of skipped stages out of the number of possible stages in the adoption of a particular innovation.

Among the sample accounting for the most innovative subjects, 30 stages were skipped out of a possible 530 (5 X 106), with 27 of these accounting for the trial stage. In other words, 25% of this group indicated during the interview that they did not have a trial stage before the adoption of an innovation. It was also determined that three individuals skipped the evaluation stage.

Among the sample accounting for the least innovative subjects, 35 stages were skipped out of a possible 285 (5 X 57). Four subjects interviewed stated that they had skipped the evaluation stage and 31, or 54%, admitted that they had not had a trial stage.

Research in rural sociology yielded validity for the adoption stage concept. Rogers and Beal (1960) found that most individuals go through each of the five stages for each innovation studied. More specifically, they found that only 20 stages were skipped out of a possible 1170 stages (for two farm innovations adopted by 129 and 104 respondents respectively). The trial stage was skipped most often, and particularly by late adopters. The fact than only a few respondents reported skipping any stages provided evidence that the stage concept is valid.

This study produced findings that conflict with the rural sociologists and hence raised some questions about the validity of the stage concept in education. Among the sample accounting for the least innovative subjects, the trial stage was skipped by more than half of the subjects. For this particular sample group, composed mainly of classroom teachers, the evidence seems to refute the validity of the five stage concept. Perhaps this is because the individuals adopted on impulse, that is, they became aware of an innovation and they adopted it quickly. It should be mentioned that adoption could occur on impulse or very rapidly because of the characteristics of the innovation. Many innovations mentioned were relatively inexpensive (i.e., overhead projectors) and technically simple in nature. Decisions were made about such innovations without a trial stage.

Among the sample accounting for the most innovative subjects, the trial stage was skipped by 25% of the group. Hence, for this group, composed mainly of administrators, and five stage adoption concept is valid. Perhaps, as pointed out in the preceding paragraph, the nature or characteristic of the innovation will determine whether or not a trial stage is held. Decisions to un-grade schools or institute team teaching warrant pilot phases before becoming fully adopted. Moreover, major innovations require a period of time that can often be measured in years to pass through the adoption process.

To summarize the present evidence seems to suggest that other factors such as the role of the innovator or the characteristic of the innovation and even perhaps both serve to determine the number of adoption stages. Among the sample accounting for the most innovative subject there seems support for the validity of the adoption stages concept, but the findings are not conclusive. There is very little evidence as to exactly how many stages there are in the adoption process. Do we not continue to evaluate and seek information about an innovation after the adoption stage? Nevertheless, until more evidence exists, it seems conceptually sound that the five stage adoption model is relatively applicable in the field of education.

CHAPTER FOUR: SUMMARY, GENERALIZATIONS AND CONCLUSIONS

Summary

This study offers baseline data, drawn from the practice of some six hundred educators, pertaining to the educational knowledge diffusion and utilization process. It probes into practitioners' experiences with innovations; the influences of recognized diffusion agents upon the adoption of innovations to the personal practice of educators; characteristics of selected target audiences in relation to the adoption of innovations to personal practice; and relationships between five distinguishable stages of innovation adoption described by rural sociologists and the adoption process described by randomly selected educators.

Diffusion agents which seemed representative of those currently employed in the field of education were selected for study. They included publications, brief assemblages (annual meetings and regional research institutes), and extended assemblages (NDEA summer and academic year institutes). Twenty one specific diffusion agents were included in the study.

Subjects were selected because of their exposure to those particular diffusion agents. The level of experience of the 595 subjects actually contributing to the analyses includes 164 teachers, 240 supervisors and administrators, 60 teacher educators, and 131 individuals representing a variety of roles, retirement status, and student status. A modal portrait of the sample reveals supervisors and administrators to be the largest of the sub-groups included, about three quarters of the sample served in the field for more than ten years, and an even greater fraction possessed a masters degree or more. Hence, the sample is well-educated, experienced, and employed in numerous leadership roles.

Data was obtained on the basis of face-to-face interviews. Carefully trained interviewers, adhering to a pre-tested survey inventory, gathered data from subjects residing in all states east of the Mississippi River (plus a few residing west of the river). Audio tapes were made of each interview for later analyses.

The data codification scheme ultimately employed was built upon insight gained from four prior attempts to handle the data meaningfully. It met the criterion of openness, clarity, internal consistency, and external validity set forth by the researchers. And it lent itself to key punch card storage and computer data processing.

An incredible amount of data were generated from this study, which permitted a thorough analysis of knowledge diffusion and utilization practices within the parameters set forth. The results of frequency counts and cross tabulations constitute the heart of this report. These results are offered as the first stage of data analysis. More sophisticated analyses of specific aspects of these data are currently underway or are about to get underway. The researchers hope to use data made available as a hypothesis-generating base for subsequent empirical inquiry.

Generalizations

1. The sample is well-educated, experienced, and employed in numerous leadership roles. Yet:

    a. Most of the innovative activity described by them was quite incidental to the operation and financing of the established order. Simple substitution accounted for more than half of the innovative interventions mentioned.

    b. Most of the innovations discussed were drawn from outside the environ of the practitioner and used intact or after modifications. Few subjects discussed innovations which were originated personally.

    c. Innovations described hardly influenced environments beyond that of the subject and his immediate associates.

    d. Nearly half of the subjects indicated no trial period was employed during the course of innovation adoption. Nevertheless, most innovations discussed became a part of the practitioners' routine.

The behavior described above does not seem compatible with the leadership potentional offered by the sample interviewed.

2. More than two-thirds of the subjects mentioned diffusion strategies of interest to this study and regarded them as important sources of information (as when asked to note the influence of selected information sources upon their knowledge of educational innovation). Much to the amazement of the researchers, nine in ten subjects interviewed failed to relate in any way specific innovations discussed to these same diffusion strategies. Such an inconsistency raises doubts as the the usefulness of information about practitioners' knowledge utilization behavior which has been generated via mailed questionnaire survey instruments. The inconsistency also reflects a marked shortcoming of diffusion agents' style insofar as influencing practitioner behavior is concerned.

3. The two most frequent reasons offered for change by innovative subjects are dissatisfaction with current practice and a desire to expand current practice. These reasons are compatible with available research evidence and the behavior of practitioners in related disciplines. Those reasons, as amplified, reveal practitioners' preference for gradual evolution rather than revolution in their work.

4. Practicality was of paramount importance both in trying out innovations and in eventually adopting them within practice. Perhaps more individuals who are now responsible for knowledge generation and diffusion need to cogitate this evidence.

5. The sample offered some interesting information about the style, duration, and audience size of diffusion strategies. For example:

   a. Personal, direct involvement type diffusion strategies (including, by definition, colleague contact, workshops, institutes, courses, etc.) were most popular with the innovative subjects considering both sources of innovation awareness and sources employed to extend interest in innovations.

   b. While the duration of diffusion strategies didn't seem to influence innovative subjects' awareness of innovations, it did seem to influence subjects' continuing interest in them. Uncontrolled sources (i.e., publications, broadcasts, etc.) and sources calling for less than one week's involvement, accounted for most of the responses.

c. Perhaps the only meaningful information compiled about audience participation in diffusion strategies recognized by subjects as important contributors to both awareness and interest in innovations discussed is the revelation that large group participation (N = 50 or more participants) was rarely mentioned. This evidence points to the need to clarify purposes for regional and national meetings held annually.

Purveyors of knowledge ought to take note of this evidence, as it offers directions for more deliberate planning by them.

6. Considering the influences of role, experience and training upon practice:

a. Teachers and bachelors degree holders responded more conservatively, less imaginatively, and more closely to conventional practice, than other subject groups interviewed.

b. Teacher educators personally conceived more innovations than other subjects and they based impressions of innovations upon observation rather than ignore a trial stage as did most other subjects.

In general, there were no stark variations in practice related to role, experience, and training.

7. Considering the influences of all sources of data upon practice:

a. ASCD institute participants varied from other groups in that they used a trial stage (impressions based upon observation) in the process of innovation adoption; they described innovations requiring minor alterations in practice (rather than simple substitution) they described innovations used by numerous practitioners (rather than by only the innovator and his immediate associates); and, they relied upon nondescript (rather than personal, direct involvement) sources both to generate interest and to extend interest in innovations discussed.

b. NDEA summer institute participants used innovations only in their own practice (others involved immediate associates as well); and, they described innovations ready made elsewhere which were adopted intact.

c. Publication users, like the NDEA institute group, described innovations ready made elsewhere which were adopted intact.

The ASCD institute participants represented the only noteworthy departure in this category.

8. Considering data sources accounting for the most and least innovative subjects:

   a. Three ASCD regional institutes, one NDEA academic year institute, and one publication accounted for the most innovative group; conversely three NDEA summer institutes, and two publications harbored the least innovative group.

   b. No variations between the groups were noteworthy when experience was analyzed. However, education level accounted for a substantial difference as did role. The most innovative were better educated and served as supervisors and administrators. The least innovative possessed fewer graduate degrees and served as teachers.

   When style, duration, and audience size are considered, no clear-cut pattern emerges to distinguish the most fruitful from the least fruitful diffusion strategies. ASCD institutes stand out on the positive side of a balance sheet; NDEA summer institutes on the negative side.

9. Educators do not rely upon the five stage model of change set forth by rural sociologists. Rather, a three stage model of change seems to be in effect. The first combines awareness of and continuing interest in an innovation (the data analyzed revealed little difference between responses to these two factors). The second is similar to the evaluation stage described by the rural sociologists. Whereas, the third is the adoption stage. The most conspicuous difference between the educators' and the rural sociologists' change schemes is the absence of a trial stage in the former group's pattern.

Two studies were conducted using sub-sections of the total project sample. Results obtained from each of these investigations are offered in the following paragraphs.

Prevalent Practices of the Most and Least Innovative Subjects

Generalizations derived from this study of a sub-section of the sample are reported as follows:

1. Innovators are generally younger than laggards.
2. Impersonal sources of information are more important than personal sources of information both for innovators and for laggards. No attempt was made to analyze these results by adoption stage. This conclusion is a marked departure from research obtained on farmer's innovation adoption behavior.
3. Innovators mentioned a greater total number of personal and impersonal sources than did laggards.
4. Cosmopolite sources of information are more important than localite sources of information both for innovators and for laggards. Reasons for this unexpected finding, which also departs from research generated by rural sociologists, is unclear.
5. Innovators mentioned a far greater number of cosmopolite sources than did laggards, whereas the two groups didn't differ markedly in their references to localite sources.
6. Innovators mentioned a higher total number of sources of information and a higher average number of information sources than did laggards.
7. There is a positive relationship between role and information sources and between degree of innovativeness and information sources.

While the above findings confirm research reported by rural sociologists generally, there were two departures from this pattern noted above. Item two and item four do not conform to the agricultural tradition. Analyses of these departures didn't reveal convincing reasons for the discrepancies.

Characteristics of Subjects Exposed to the Most and Least Innovative Information Sources

Generalizations derived from this second study of a sub-section of the sample are reported as follows:

1. Personal information sources are more important than impersonal sources at both the awareness and evaluation stages of the adoption process, whereas impersonal sources are more important at the interest stage for innovative subjects.

2. Both sources were used equally at the awareness stage, impersonal sources at the interest stage, and personal sources overwhelmingly at the evaluation stage, by laggard subjects.

3. Generally, the use of the above-mentioned information sources by educators supports theory offered by rural sociologists. Personal contact appears to be an important dimension in the innovation adoption process.

4. Cosmopolite information sources are overwhelmingly preferred by both innovators and laggards at the awareness and interest stages of the adoption process. Neither cosmopolite or localite sources are used at the evaluation stage. These results depart from rural sociological theory at the evaluation stage where localite sources are an important aspect of the adoption phenomenon.

5. The five-stage adoption concept offered by rural sociologists parallels the behavior of innovators more so than laggards in the field of education. In each group, the trial stage was treated lightly. However, the most plausible generalization from this analysis is that the role of the subject or characteristics of the innovation and perhaps a combination of both serve to determine the number of stages in the adoption process.

NOTE: The two studies mentioned above conflict in their findings on one point; namely, the influence of personal and impersonal sources of information upon the adoption process. There seems to be a plausible explanation of this difference. The first study treated gross study responses, whereas the second study focused upon responses in relation to specific stages of adoption.

Conclusions

The following conclusions are offered by the researchers, given intentions set forth for this study.

Intention: To study the extent to which subjects engaged in innovative activity.

Conclusion: To what extent were the subjects innovative? At least one innovation was adopted by 70% of the subjects; at least two by 24%; and at least three by 7%. At least one innovation was earmarked for adoption by 46% of the subjects; at least two by 8%; and at least three by 1%. At least one innovation of interest was mentioned but not adopted by 63% of the subjects; at least two by 18%; and at least three by 4%. Hence, the sample was immersed in innovative activity. Sufficient work was reported to permit an intensive study of the innovation adoption process, given the researchers' concerns about knowledge diffusion and utilization.

Intention: To study the influences of recognized diffusion agents upon the adoption of innovations to subjects' personal practice.

Conclusion: Since nine in ten subjects interviewed failed to relate in any way specific innovations discussed to diffusion strategies of interest to the study (even though their exposure to these diffusion strategies accounted for subject inclusion in the study), it is not unreasonable to believe selected diffusion strategies aren't exerting much influence upon the adoption of innovations to subjects' personal practice. Most of the diffusion agents are purveying practices, products, and ideas worthy of adoption; yet, adoption behavior certainly isn't related to their purveying effort. Perhaps the diffusion strategies need to be re-examined in light of data reported.

Intention: To study characteristics of selected target audiences in relation to the adoption of innovations to personal practice.

Conclusion: Insofar as level of experience, years of experience, and earned academic credit are concerned, there were no stark variations in practice. Specific exceptions have been previously noted. Most of the subjects interviewed were experienced, well-educated, and representative of one of three kinds of roles. Since demographic characteristics of the sample couldn't be pre-determined, these analyses weren't particularly fruitful.

Intention: To study characteristics of selected diffusion strategies in relation to the adoption of innovations to personal practice.

Conclusion: Insofar as style, diration, and audience size of the diffusion strategies are concerned, there were several practices worthy of comment. Personal, direct involvement type diffusion strategies seemed to foster innovative activity more than other styles. Uncontrolled sources and sources calling for less than one week's involvement related to subjects' continuing interest in innovations. Whereas, most subjects rarely mentioned large group participation (N = 50 or more participants) in relation to innovative activity.

Agencies interested in the diffusion of educational innovations need to consider factors such as personal involvement, small group experiences, and follow-up when they plan professional programs. Purposes set forth for large group regional and annual meetings need to be reconsidered. So do purposes for periodicals and other widely distributed publications.

Intention: To study relationships between five stages of innovation adoption described by rural sociologists and the adoption process described by randomly selected educators.

Conclusion: Educators adhere to a three stage rather than a five stage model. Thsse stages include (1) awareness and continuing interest, (2) evaluation, and (3) adoption.

Educators do not rely upon either a trial stage or scientifically gathered information in the process of innovation adoption.

Educators seem to be "turned on" by an innovation for practical reasons and then follow it through to the bloody end, called adoption, with little variation. Once adopted, innovations become a fixture within the educator's practice.

More rational and more deliberate behavior were anticipated by the researchers. These data reveal rather vividly the absence of disciplined inquiry as part of the educators' innovation adoption behavior. Much work needs to be done before the process of educational knowledge diffusion exerts a continuing influence upon educational knowledge utilization.

Discussion

Many of the subjects interviewed were engaged in the process of changing their pedagogical practice; however, most of the changes occurred on the periphery of the educational operation. Few stark alterations of practice were uncovered. Given the educational and experiential background of these subjects, the group studied was certainly well situated to effect change. It is somewhat disappointing to note that much of their energy was being expended in behalf of innovations not apt to markedly alter the status of conventional practice.

An attempt was made to relate selected information purveyors' efforts to the needs of selected educational practitioners in this study. Little relationship is apparent. Even though practitioners selected for this investigation were exposed to a variety of specific knowledge diffusion sources, they just didn't utilize these sources when engaging in innovation adoption activity. They did utilize a variety of such sources, but in what appears to be a fortuitous manner, when one stands in the path of a shotgun blast--even at long range--he is probably going to feel the effects of some of the "shot". The educational communication network seems to operate as a shotgun aimed at an amorphous target audience almost out of range of the weapon. Hence, the unpredictable nature of information utilization at the practitioner level.

Insofar as subjects' mentioned information sources in the context of their innovative activity, certain patterns were apparent. Personal, direct involvement type diffusion strategies seemed to foster innovative activity more than other styles. Agencies interested in the diffusion of educational innovations take note!

Finally, innovations are treated in a most cavalier manner by educational practitioners. Little is known about innovations under consideration in terms of their effects upon students. Nevertheless, these innovations get adopted and become part of the conventional wisdom on an almost routine basis. Studies of the influences of prospective innovations upon educational operations need to become a regular part of an educational decision maker's repertoire.

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APPENDIX

Master Codification Scheme

Demographic Information Card for Each Subject

A. Subject number (1 through 700)

1. Level of experience:
   - (a) Teacher
   - (b) Supervisor and Administrator
   - (c) Teacher educator
   - (d) Other
2. Years of experience:
   - (a) Less than one year
   - (b) One to ten years
   - (c) More than ten years
   - (d) Other
3. Earned academic credits:
   - (a) Less than four years
   - (b) Bachelors but less than 30 hours of graduate credit
   - (c) Masters degree or more

B. Source of data (1 through 21) from which subjects were selected

1. ASCD Institutes
   - (a) Detroit
   - (b) Denver
   - (c) Washington, D.C.
   - (d) Minneapolis, Minnesota
2. NDEA Summer Institutes
   - (a) Virginia
   - (b) Middlebury
   - (c) Howard
   - (d) Albright
3. NDEA Academic Year Institutes:
   - (a) Georgia
   - (b) Buffalo
   - (c) Bank Street
   - (d) New York University
4. Publications:
   - (a) *School Science and Mathematics*
   - (b) *The Instructor*
   - (c) *Elementary English*
   - (d) *National Elementary Principal*
   - (e) *Saturday Review*
5. Annual Meetings:
   - (a) ASCD
   - (b) ACEI
   - (c) IRA
   - (d) DESP

C. Index of innovativeness (1 through 42) determined from 8, 9, and 10 series

1. Adopted (1 through 27)
2. Plan to adopt (1 through 12)
3. Tried but failed to adopt (1 through 3)

D. Interviewer (1 through 8)

The Inventory Items

SEVEN SERIES

7.1 Classification of identified innovations in terms of effects upon practice

- a. Alter existing curricular patterns
- b. Alter methods of instruction
- c. Alter existing organizational structure
- d. Alter physical facilities of practice setting
- e. Alter materials used in practice
- f. Other

7.2 Initial Awareness

- a. Personally conceived
- b. Associates and friends
- c. Publications
- d. Meetings
- e. Other

7.3 Secondary Awareness

- a. Personally conceived
- b. Associates and friends
- c. Publications
- d. Meetings
- e. Other

EIGHT SERIES

8.X Yes

8.Y No (Go on to the nine series)

8A. Characteristics of Educational Change in Relation to Innovations Discussed

8A.1. Nature of practice, product, or idea identified:

- a. Ready-made somewhere else.
- b. Something adopted or modified for local use.
- c. Orginated by the innovator.
- d. Other.
- e. No response.

8A.2. Time of initial awareness of innovation:

- a. Less than one year ago.
- b. One to three years ago.
- c. Three or more years ago.
- d. Don't recall.
- e. No response.

8A.3. Source of practice, product, or idea discussed:

- a. Internally generated (within environ of practitioner interviewed) by teacher.
- b. Internally generated (within environ of practitioner interviewed) by administrator.
- c. Internally generated (within environ of practitioner interviewed) by some other party.
- d. Externally generated (outside environ of practitioner interviewed) by teacher.
- e. Externally generated (outside environ of practitioner interviewed) by administrator.
- f. Externally generated (outside environ of practitioner enterviewed) by some other party.
- g. No response.

8A.4. Nature of intervention in target setting:

- a. Simple substitution of one (practice, product, or idea) for another required.
- b. Minor alteration in practice required (i.e., merged courses, varied time schedules, new curriculum offerings, and so forth).
- c. Major alteration in practice required (i.e., curriculum reorganization, staff structure altered, facilities altered and so forth).
- d. Other.
- e. No Response.

8A.5. Reason for changing practice:

a. Intrinsic motivation-dissatisfaction with current practice.
b. Intrinsic motivation-extend or expand current practice.
c. Intrinsic-other.
d. Extrinsic motivation-dissatisfaction with current practice.
e. Extrinsic motivation-extend or expand current practice.
f. Extrinsic-other.
g. No response.

8A.6. Probable use within target setting:

a. Used only by innovator.
b. Used by innovator and immediate associates.
c. Used by numerous practitioners besides the innovator.
d. Other.
e. No response.

8A.7. Status of innovations adopted:

a. Continue using in the present manner.
b. Continue using after modifications are made.
c. Uncertain.
d. Discontinue use when feasible.
e. No response.

8B Functional Stages in the Process of Educational Change in the Context of a Model Offered by Rural Sociologists

8B.1. Probable source of Awareness of the innovations discussed:

a. Personally conceived.
b. Nondescript (publications, broadcases, etc.).
c. Personal passive involvement (lectures, meetings, etc.).
d. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
e. Other.
f. Can't recall.
g. No response.

8B.2. Information source of importance employed to extend Interest in the innovations discussed:

a. Personally conceived.
b. Nondescript (publications, broadcasts, etc.).
c. Personal, passive involvement (lectures, meetings etc.).
d. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
e. Other.
f. Can't recall.
g No response.

8B.3. Evaluation basis for trying out innovation:

a. Intrinsic motivation-satisfy curiosity.
b. Intrinsic motivation-practical.
c. Extrinsic motivation-edict.
d. Extrinsic motivation-practical.
e. Other.
f. No evaluation apparent.
g. No response.

8B.4. Evidence gathered during Trial period:

a. Impressions based upon observation.
b. Acquisition of descriptive data.
c. Acquisition of empirical data.
d. Other.
e. No trial apparent.
f. No response.

8B.5. Reason for Adoption of innovations discussed:

a. Intrinsic motivation-conviction.
b. Intrinsic motivation-practical.
c. Intrinsic motivation-empirical evidence.
d. Extrinsic motivation-edict.
e. Extrinsic motivation-practical.
f. Extrinsic motivation-empirical evidence.
g. Other.
h. No response.

8C. Characteristics of Diffusion Strategies in Relation to Innovations Discussed

8C.1. Relationship between diffusion strategy of interest and subject recognition of it during discussion of innovations:

a. No mention of diffusion strategy of interest by subject.
b. Diffusion strategy of interest mentioned, but not related to innovations discussed.
c. Diffusion strategy of interest related incidentally to innovations discussed.
d. Diffusion strategy of interest related directly in innovations discussed.
e. Other.

8C.2. Nature of diffusion strategies of importance to subjects who described innovations:

a. Nondescript (publications, broadcasts, etc.).
b. Personal, but passive involvement (lectures, workshops, institutes, courses, etc.).
c. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
d. Other.
e. Can't recall.
f. No response.

8C.3. STYLE of diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS of innovations discussed:

a. Nondescript.
b. Personal, but passive involvement.
c. Personal, direct involvement.
d. Other.
e. Can't recall.
f. No response.

8C.4. STYLE of diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Nondescript.
b. Personal, but passive involvement.
c. Personal, direct involvement.
d. Other.
e. Can't recall.
f. No response.

8C.5. DURATION of diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS of innovations discussed:

a. Subject involvement uncontrolled (i.e., publications, broadcasts, etc.)
b. Less than one week.
c. Less than three months.
d. Less than one year.
e. Other.
f. Can't recall.
g. No response.

8C.6. DURATION of diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Subject involvement uncontrolled (i.e. publications, broadcasts, etc.).
b. Less than one week.
c. Less than three months.
d. Less than one year.
e. Other.
f. Can't recall.
g. No response.

8C.7. AUDIENCE PARTICIPATION in diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS in innovations discussed:

a. Individual (i.e., publications, broadcasts, etc.).
b. Small group (N = 50 or less).
c. Large group.
d. Other.
e. Can't recall.
f. No response.

8C.8. AUDIENCE PARTICIPATION in diffusion strategies (either within sample or other) recognized by subject as important contributors in INTEREST in innovations discussed:

a. Individual (i.e., publications, broadcasts, etc.).
b. Small group (N = 50 or less).
c. Large group.
d. Other.
e. Can't recall.
f. No response.

NINE SERIES

9.X Yes

9.Y No (Go on to the ten series)

9.A. Characteristics of Educational Change in Relation to Innovations Discussed

9A.1. Nature of practice, product, or idea identified:

a. Ready-made somewhere else.
b. Something adopted or modified for local use.
c. Originated by the innovator.
d. Other.
e. No response.

9A.2. Time of initial awareness of innovation:

a. Less than one year ago.
b. One to three years ago.
c. Three or more years ago.
d. Don't recall.
e. No response.

9A.3. Source of practice, product, or idea discussed:

a. Internally generated (within environ of practitioner interviewed) by teacher.
b. Internally generated (within environ of practitioner interviewed) by administrator.
c. Internally generated (within environ of practitioner interviewed) by some other party.
d. Externally generated (outside environ of practitioner interviewed) by teacher.
e. Externally generated (outside environ of practitioner interviewed) by administrator.
f. Externally generated (outside environ of practitioner interviewed) by some other party.
g. No response.

9A.4. Nature of intervention in target setting:

a. Simple substitution of one (practice, product, or idea) for another required.
b. Minor alteration in practice required (i.e., merged courses, varied time schedules, new curriculum offerings, and so forth).
c. Major alteration in practice required (i.e., curriculum reorganization, staff structure altered, facilities altered and so forth).
d. Other.
e. No Response.

9A.5. Reason for changing practice:

- a. Intrinsic motivation-dissatisfaction with current practice.
- b. Intrinsic motivation-extend or expand current practice.
- c. Intrinsic-other.
- d. Extrinsic motivation-dissatisfaction with current practice.
- e. Extrinsic motivation-extend or expand current practice.
- f. Extrinsic-other.
- g. No Response.

9A.6. Probable use within target setting:

- a. Used only by innovator.
- b. Used by innovator and immediate associates.
- c. Used by numerous practitioners besides the innovator.
- d. Other.
- e. No response.

9B. Functional Stages in the Process of Educational Change in the Context of a Model Offered by Rural Sociologists

9B.1. Probable source of Awareness of the innovations discussed:

- a. Personally conceived.
- b. Nondescript (publications, broadcasts, etc.).
- c. Personal, passive involvement (lectures, meetings, etc.)
- d. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
- e. Other.
- f. Can't recall.
- g. No response.

9B.2. Information source of importance employed to extend Interest in the innovations discussed:

- a. Personally conceived.
- b. Nondescript (publications, broadcasts, etc.).
- c. Personal, passive involvement (lectures, meetings, etc.).
- d. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
- e. Other.
- f. Can't recall.
- g. No response.

9B.3. Evaluation basis for trying out innovation:

- a. Intrinsic motivation-satisfy curiosity.
- b. Intrinsic motivation-practical.
- c. Extrinsic motivation-edict.
- d. Extrinsic motivation practical.
- e. Other.
- f. No evaluation apparent.
- g. No response.

9B.4. Evidence to be gathered during Trial period:

a. Impressions based upon observation.
b. Acquisition of descriptive data.
c. Acquisition of empirical data.
d. Other.
e. No trial apparent.
f. No response.

9B.5. Reason for desiring Adoption of innovations discussed:

a. Intrinsic motivation-conviction.
b. Intrinsic motivation-practical.
c. Intrinsic motivation-empirical evidence.
d. Extrinsic motivation-edict.
e. Extrinsic motivation-practical.
f. Extrinsic motivation-empirical evidence.
g. Other.
h. No response.

9C. Characteristics of Diffusion Strategies in Relation to Innovations Discussed

9C.1. Relationship between diffusion strategy of interest and subject recognition of it during discussion of innovations:

a. No mention of diffusion strategy of interest by subject.
b. Diffusion strategy of interest mentioned, but not related to innovations discussed.
c. Diffusion strategy of interest related incidentally to innovations discussed.
d. Diffusion strategy of interest related directly in innovations discussed.
e. Other.

9C.2. Nature of diffusion strategies of importance to subjects who described innovations:

a. Nondescript (publications, broadcasts, etc.).
b. Personal, but passive involvement (lectures, meetings, etc.).
c. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
d. Other.
e. Can't recall.
f. No response.

9C.3. STYLE of diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS of innovations discussed:

a. Nondescript.
b. Personal, but passive involvement.
c. Personal, direct involvement.
d. Other.
e. Can't recall.
f. No response.

9C.4. STYLE of diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Nondescript.
b. Personal, but passive involvement.
c. Personal, direct involvement.
d. Other.
e. Can't recall.
f. No response.

9C.5. DURATION of diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS of innovations discussed:

a. Subject involvement uncontrolled (i.e., publications, broadcasts, etc.).
b. Less than one week.
c. Less than three months.
d. Less than one year.
e. Other.
f. Can't recall.
g. No response.

9C.6. DURATION of diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Subject involvement uncontrolled (i.e., publications, broadcasts, etc.).
b. Less than one week.
c. Less than three months.
d. Less than one year.
e. Other.
f. Can't recall.
g. No response.

9C.7. AUDIENCE PARTICIPATION in diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS in innovations discussed:

a. Individual (i.e., publications, broadcasts, etc.).
b. Small group (N = 50 or less).
c. Large group.
d. Other.
e. Can't recall.
f. No response.

9C.8. AUDIENCE PARTICIPATION in diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Individual (i.e., publications, broadcasts, etc.).
b. Small group (N = 50 or less).
c. Large group.
d. Other.
e. Can't recall.
f. No response.

TEN SERIES

10.X Yes

10.Y No (Go on to the eleven series)

10A. Characteristics of Educational Change in Relation to Innovations Discussed

10A.1. Nature of practice, product, or idea identified:

a. Ready-made somewhere else.
b. Something adopted or modified for local use.
c. Originated by the innovator.
d. Other.
e. No response.

10A.2. Time of initial awareness of innovation:

a. Less than one year ago.
b. One to three years ago.
c. Three or more years ago.
d. Don't recall.
e. No response.

10A.3. Source of practice, product, or idea discussed:

a. Internally generated (within environ of practitioner interviewed) by teacher.
b. Internally generated (within environ of practitioner interviewed) by administrator.
c. Internally generated (within environ of practitioner interviewed) by some other party.
d. Externally generated (outside environ of practitioner interviewed) by teacher.
e. Externally generated (outside environ of practitioner interviewed by administrator.
f. Externally generated (outside environ of practitioner interviewed) by some other party.
g. No response.

10A.4. Nature of intervention in target setting:

a. Simple substitution of one (practice, product, or idea) for another required.
b. Minor alteration in practice required (i.e., merged courses, varied time schedules, new curriculum offerings, and so forth).
c. Major alteration in practice required (i.e., curriculum reorganization, staff structure altered, facilities altered, and so forth.).
d. Other.
e. No response.

10A.5. Reasons for changing practice:

- a. Intrinsic motivation-dissatisfaction with current practice.
- b. Intrinsic motivation-extend or expand current practice.
- c. Intrinsic-other.
- d. Extrinsic motivation-dissatisfaction with current practice.
- e. Extrinsic motivation-extend or expand current practice.
- f. Extrinsic-other.
- g. No response.

10B. Functional Stages in the Process of Educational Change in the Context of a Model Offered by Rural Sociologists

10B.1. Probable source of Awareness of the innovations discussed:

- a. Personally conceived.
- b. Nondescript (publications, broadcasts, etc.).
- c. Personal, passive involvement (lectures, meetings, etc.).
- d. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
- e. Other.
- f. Can't recall.
- g. No response.

10B.2. Information source of importance employed to extend Interest in the innovations discussed:

- a. Personally conceived.
- b. Nondescript (publications, broadcasts, etc.).
- c. Personal, passive involvement (lectures, meetings, etc.).
- d. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
- e. Other.
- f. Can't recall.
- g. No response.

10B.3. Evaluation basis for trying out innovation:

- a. Intrinsic motivation-satisfy curiosity.
- b. Intrinsic motivation-practical.
- c. Extrinsic motivation-edict.
- d. Extrinsic motivation-practical.
- e. Other.
- f. No evaluation apparent.
- g. No response.

10B.4. Evidence to be gathered during Trial period:

- a. Impressions based upon observation.
- b. Acquisition of descriptive data.
- c. Acquisition of empirical data.
- d. Other.
- e. No trial apparent.
- f. No response.

10B.5. Reason for desiring Adoption of innovations discussed:

- a. Intrinsic motivation-conviction.
- b. Intrinsic motivation-practical.
- c. Intrinsic motivation-empirical evidence.
- d. Extrinsic motivation-edict.
- e. Extrinsic motivation-practical.
- f. Extrinsic motivation-empirical evidence.
- g. Other.
- h. No response.

10C. Characteristics of Diffusion Strategies in Relation to Innovations Discussed

10C.1. Relationship between diffusion strategy of interest and subject recognition of it during discussion of innovations:

- a. No mention of diffusion strategy of interest by subject.
- b. Diffusion strategy of interest mentioned, but not related to innovations discussed.
- c. Diffusion strategy of interest related incidentally to innovations discussed.
- d. Diffusion strategy of interest related directly to innovations discussed.
- e. Other.

10C.2. Nature of diffusion strategies of importance to subjects who described innovations:

- a. Nondescript (publications, broadcasts, etc.).
- b. Personal, but passive involvement (lectures, meetings, etc.).
- c. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
- d. Other.
- e. Can't recall.
- f. No response.

10C.3. STYLE of diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS of innovations discussed:

- a. Nondescript.
- b. Personal, but passive involvement.
- c. Personal, direct involvement.
- d. Other.
- e. Can't recall.
- f. No response.

10C.4. STYLE of diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

- a. Nondescript.
- b. Personal, but passive involvement.
- c. Personal, direct involvement.
- d. Other.
- e. Can't recall.
- f. No response.

10C.5. DURATION of diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS of innovations discussed:

a. Subject involvement uncontrolled (i.e., publications, broadcasts, etc.).
b. Less than one week.
c. Less than three months.
d. Less than one year.
e. Other.
f. Can't recall.
g. No response.

10C.6. DURATION of diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Subject involvement uncontrolled (i.e., publications, broadcasts, etc.).
b. Less than one week.
c. Less than three months.
d. Less than one year.
e. Other.
f. Can't recall.
g. No response.

10C.7. AUDIENCE PARTICIPATION in diffusion strategies (either within sample or other) recognized by subject as important contributors to AWARENESS in innovations discussed:

a. Individual (i.e., publications, broadcasts, etc.).
b. Small group (N = 50 or less).
c. Large group.
d. Other.
e. Can't recall.
f. No response.

10C.8. AUDIENCE PARTICIPATION in diffusion strategies (either within sample or other) recognized by subject as important contributors to INTEREST in innovations discussed:

a. Individual (i.e., publications, broadcasts, etc.).
b. Small group (N = 50 or less).
c. Large group.
d. Other.
e. Can't recall.
f. No response.

10C.9. Reasons for failing to adopt innovations discussed:

a. Inadequate financial support.
b. Lack of support from colleagues.
c. Needed raw materials or technology unavailable.
d. Evidence accumulated did not justify.
e. Changed positions.
f. Other.
g. No response.

ELEVEN SERIES

11.1 Relationship between diffusion strategy of interest and subject recognition of it as an important information source:

a. No mention of diffusion strategy of interest by subject.
b. Diffusion strategy of interest mentioned, but not regarded as an important source.
c. Other.
d. No response.

11.2 Nature of diffusion strategies regarded by subjects as important information source;

a. Nondescript (publications, broadcasts, etc.).
b. Personal, but passive involvement (lectures, meetings, etc.).
c. Personal, direct involvement (colleagues, workshops, institutes, courses, etc.).
d. Other.
e. No response.

11.3 Value ascribed to nondescript sources:

a. Primarily exposure to innovations.
b. Primarily exposure to controversy.
c. Primarily exposure to information (to be used in practice).
d. Primarily exposure to information (not directly related to practice such as training opportunities, governmental action, professional developments).
e. Other.
f. No response.

11.4 Value ascribed to personal, but passive involvement sources:

a. Primarily exposure to innovations.
b. Primarily exposure to controversy.
c. Primarily exposure to information (to be used in practice).
d. Primarily exposure to information (not directly related to practice such as training opportunities, governmental action, professional developments).
e. Other.
f. No response.

11.5 Value ascribed to personal, direct involvement sources;

a. Primarily exposure to innovations.
b. Primarily exposure to controversy.
c. Primarily exposure to information (to be used in practice).
d. Primarily exposure to information (not directly related to practice such as training opportunities, governmental action, professional developments.
e. Other.
f. No response.

TWELVE SERIES

12.1 Subscription to Saturday Review

a. Yes

b. No

Keypunch Master Scheme

DEMOGRAPHIC DATA	CATEGORIZATION							
	1	2	3	4	5	6	7	8
SUBJECT INFORMATION								
6.0 Identification number (1 through 700)								
6.1 Level of experience	a	b	c	d				
6.2 Years of experience	a	b	c	d				
6.3 Earned academic credits	a	b	c					
DIFFUSION VEHICLE INFORMATION								
6.4 ASCD Institutes	a	b	c	d				
6.5 NDEA Summer Institutes	a	b	c	d				
6.6 NDEA Academic Year Institutes	a	b	c	d				
6.7 Publications	a	b	c	d	e			
6.8 Annual Meetings	a	b	c	d				
INDEX OF INNOVATIVENESS								
6.9 Adopted (9 x —) =								
6.10 Plan to adopts (4 x —) =								
6.11 Tried but failed to adopt (1 x —) =								
INTERVIEWER								
6.12	a	b	c	d	e	f	g	h

INVENTORY ITEM			1 1 2 3 4 5 6 7 8	2 1 2 3 4 5 6 7 8	3 1 2 3 4 5 6 7 8
SEVEN SERIES					
	7.1		a b c d e f	a b c d e f	a b c d e f
	7.2		a b c d e	a b c d e	a b c d e
	7.3		a b c d e	a b c d e	a b c d e
EIGHT SERIES	8X	Yes 8Y No - Go on to nine series			
	8A1		a b c d e	a b c d e	a b c d e
	8A2		a b c d e	a b c d e	a b c d e
	8A3		a b c d e f g	a b c d e f g	a b c d e f g
	8A4		a b c d e	a b c d e	a b c d e
	8A5		a b c d e f g	a b c d e f g	a b c d e f g
	8A6		a b c d e	a b c d e	a b c d e
	8A7		a b c d e	a b c d e	a b c d e
	8B1		a b c d e f g	a b c d e f g	a b c d e f g
	8B2		a b c d e f g	a b c d e f g	a b c d e f g
	8B3		a b c d e f g	a b c d e f g	a b c d e f g
	8B4		a b c d e f	a b c d e f	a b c d e f
	8B5		a b c d e f g h	a b c d e f g h	a b c d e f g h
	8C1		a b c d e	a b c d e	a b c d e
	8C2		a b c d e f	a b c d e f	a b c d e f
	8C3		a b c d e f	a b c d e f	a b c d e f
	8C4		a b c d e f	a b c d e f	a b c d e f
	8C5		a b c d e f g	a b c d e f g	a b c d e f g
	8C6		a b c d e f g	a b c d e f g	a b c d e f g
	8C7		a b c d e f	a b c d e f	a b c d e f
	8C8		a b c d e f	a b c d e f	a b c d e f
NINE SERIES	9X	Yes 9Y No - Go on to ten series			
	9A1		a b c d e	a b c d e	a b c d e

	INVENTORY ITEM		1	2	3
			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
	9A2		a b c d e	a b c d e	a b c d e
	9A3		a b c d e f g	a b c d e f g	a b c d e f g
	9A4	. . . .	a b c d e	a b c d e	a b c d e
	9A5		a b c d e f g	a b c d e f g	a b c d e f g
	9A6		a b c d e	a b c d e	a b c d e
	9B1	. . . .	a b c d e f g	a b c d e f g	a b c d e f g
	9B2		a b c d e f g	a b c d e f g	a b c d e f g
	9B3		a b c d e f g	a b c d e f g	a b c d e f g
	9B4	. . . .	a b c d e f	a b c d e f	a b c d e f
	9B5		a b c d e f g h	a b c d e f g h	a b c d e f g h
	9C1		a b c d e	a b c d e	a b c d e
	9C2	. . . .	a b c d e f	a b c d e f	a b c d e f
	9C3		a b c d e f	a b c d e f	a b c d e f
	9C4		a b c d e f	a b c d e f	a b c d e f
	9C5	. . . .	a b c d e f g	a b c d e f g	a b c d e f g
	9C6		a b c d e f g	a b c d e f g	a b c d e f g
	9C7		a b c d e f	a b c d e f	a b c d e f
	9C8	. . . .	a b c d e f	a b c d e f	a b c d e f
TEN SERIES	10X	Yes 10Y No - Go on to eleven series			
	10A1		a b c d e	a b c d e	a b c d e
	10A2		a b c d e	a b c d e	a b c d e
	10A3	. . . .	a b c d e f g	a b c d e f g	a b c d e f g
	10A4		a b c d e	a b c d e	a b c d e
	10A5		a b c d e f g	a b c d e f g	a b c d e f g
	10B1	. . . .	a b c d e f g	a b c d e f g	a b c d e f g
	10B2		a b c d e f g	a b c d e f g	a b c d e f g
	10B3		a b c d e f g	a b c d e f g	a b c d e f g

INVENTORY ITEM	NUMBER OF INNOVATIONS DISCUSSED		
	1	2	3
	1 2 3 4 5 6 7 8	1 2 3 4 5 6. 7 8	1 2 3 4 5 6 7 8
10B4	a b c d e f	a b c d e f	a b c d e f
10B5	a b c d e f g h	a b c d e f g h	a b c d e f g h
10C1	a b c d e	a b c d e	a b c d e
10C2	a b c d e f	a b c d e f	a b c d e f
10C3	a b c d e f	a b c d e f	a b c d e f
10C4	a b c d e f	a b c d e f	a b c d e f
10C5	a b c d e f g	a b c d e f g	a b c d e f g
10C6	a b c d e f g	a b c d e f g	a b c d e f g
10C7	a b c d e f	a b c d e f	a b c d e f
10C8	a b c d e f	a b c d e f	a b c d e f
10C9	a b c d e f g	a b c d e f g	a b c d e f g
ELEVEN SERIES			
11.1	a b c d e	a b c d e	a b c d e
11.2	a b c d e	a b c d e	a b c d e
11.3	a b c d e f	a b c d e f	a b c d e f
11.4	a b c d e f	a b c d e f	a b c d e f
11.5	a b c d e f	a b c d e f	a b c d e f
TWELVE SERIES			
12.1	a b	a b	a b

Information To Be Retrieved From Computer

INFORMATION TO BE RETRIEVED FROM COMPUTER

A. Tabulation of all inventory items, then summarize by each item and by the following:

1. Level of experience - teachers
2. Level of experience - supervisors and administrators
3. Level of experience - teacher educators
4. Years of experience - less than one year
5. Years of experience - one to ten years
6. Years of experience - more than ten years
7. Earned academic credit - less than four years
8. Earned academic credit - bachelors but less than 30 hours of graduate credit
9. Earned academic credit - masters degree or more
10. Sources of data - ASCD Institutes: Detroit
11. Sources of data - ASCD Institutes: Denver
12. Sources of data - ASCD Institutes: Washington, D. C.
13. Sources of data - ASCD Institutes: Minneapolis
14. Sources of data - all ASCD Institutes
15. Sources of data - NDEA Summer Institutes: Virginia
16. Sources of data - NDEA Summer Institutes: Middlebury
17. Sources of data - NDEA Summer Institutes: Howard
18. Sources of data - NDEA Summer Institutes: Albright
19. Sources of data - all NDEA Summer Institutes
20. Sources of data - NDEA Academic Year Institutes: Georgia
21. Sources of data - NDEA Academic Year Institutes: Buffalo
22. Sources of data - NDEA Academic Year Institutes: Bank Street
23. Sources of data - NDEA Academic Year Institutes: New York University
24. Sources of data - all NDEA Academic Year Institutes
25. Sources of data - Publications: *School Science and Math*
26. Sources of data - Publications: *The Instructor*
27. Sources of data - Publications: *Elementary English*
28. Sources of data - Publications: *National Elementary Principal*
29. Sources of data - Publications: *Saturday Review*
30. Sources of data - all Publications
31. Sources of data - Annual Meetings: ASCD
32. Sources of data - Annual Meetings: ACEI
33. Sources of data - Annual Meetings: IRA
34. Sources of data - Annual Meetings: DESP
35. Sources of data - all Annual Meetings
36. Teachers: less than one year experience
37. Teachers: one to ten years experience
38. Teachers: more than ten years experience
39. Teachers: less than four years credit
40. Teachers: bachelors but less than 30 hours graduate credit
41. Teachers: masters degree or more
42. Supervisors and administrators: less than one year experience
43. Supervisors and administrators: one to ten years experience

44. Supervisors and administrators: more than ten years experience
45. Supervisors and administrators: less than four years credit
46. Supervisors and administrators: bachelors but less than 30 hours graduate credit
47. Supervisors and administrators: masters degree or more
48. Teacher educators: less than one year experience
49. Teacher educators: one to ten years experience
50. Teacher educators: more than ten years experience
51. Teacher educators: less than four years credit
52. Teacher educators: bachelors but less than 30 hours of graduate credit
53. Teacher educators: masters degree or more

B. Obtain and then rank the index of innovativeness for each subject. Draw out the 50 highest and 50 lowest scores. Then summarize as follows:

1. Composite of highest scores with composite of lowest scores for all items.
2. Composite of highest scores with total sample scores for all items.
3. Composite of lowest scores with total sample scores for all items.
4. Subjects with highest scores in relation to 21 sources of data.
5. Subjects with lowest scores in relation to 21 sources of data.

C. Obtain and then rank the composite indices of innovativenss for each source of data (all subjects within each source of data). Draw out the five highest and the five lowest composite scores. Then summarize as follows:

1. Composite of highest scores with composite of lowest scores for all items.
2. Composite of highest scores with total sample scores for all items.
3. Composite of lowest scores with total sample scores for all items.